



Tennessee State Oral Health Plan

Tennessee Department of Health | 2022-2027 Plan



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Introduction

Foreword

Oral health affects every part of our lives from our job prospects and confidence to our risk for developing other diseases such as dementia. Improving the oral health of Tennesseans remains a priority for the Tennessee Department of Health. In partnership with state, local and community stakeholders, we continue our work to prevent oral disease and ensure access to quality oral health services. Over the past year, the Department has participated in the Healthy Smiles Initiative workgroup with public and private partners across Tennessee. This Initiative's workgroup issued a final report detailing a plan to increase oral health access in Tennessee and strengthen our workforce through cross-sector collaboration and long-term partnerships. The State Oral Health Plan furthers this work by summarizing and defining the Department's goals and role in improving the oral health of Tennesseans.

Over the next five years, the Department will continue being an active participant in the Healthy Smiles Initiative, and focus our oral health work in four key areas:

1. Access to Care
2. Oral Health Education and Advocacy
3. Prevention of Oral Disease
4. Oral Health Resources and Workforce

Together with support from our partners, the State Oral Health Plan will further the Department's mission to ***Protect, promote, and improve the health and prosperity of people in Tennessee*** and push us closer to our vision of ***Healthy People, Healthy Communities, Healthy Tennessee***.



Morgan McDonald, MD FAAP FACP
Commissioner, Tennessee Department of Health

Executive Summary

The 2022 Edition of the Tennessee State Oral Health Plan is the second edition of the state’s five-year statewide, comprehensive oral health plan. This plan supports the mission of the Tennessee Department of Health (Tennessee Department of Health), “to protect, promote, and improve the health and prosperity of people in Tennessee”. The plan was formulated in accordance with TN Code § 68-1-305, which authorizes the Tennessee Department of Health to develop a “comprehensive, state oral health plan.”

Tennessee Department of Health Mission
"Protect, Promote, and Improve the health and prosperity of
people in Tennessee."

State Oral Health Plan Purpose and Review:

The last edition of the State Oral Health Plan in 2017 focused on four key areas to address oral health: 1. Monitoring Dental Disease in Tennessee, 2. Oral Health Education and Advocacy, 3. Prevention, and 4. Oral Health Resources and Workforce. Since 2017, the Department has made substantial progress in many of the goals within each of the four key areas. Even so, opportunities for growth and demand for dental services in Tennessee persist.

2022 State Oral Health Plan:

Building on Tennessee’s long-standing commitment to improving oral health in Tennessee, the 2022 Tennessee State Oral Health Plan details how the Tennessee Department of Health is working to improve dental care access and expand Tennessee’s dental care workforce. Additionally, the Plan includes recommendations that serve as a guide for the Department’s work in improving oral health. Recommendations focus on four key areas:

1. Access to Care
2. Oral Health Education and Advocacy
3. Prevention of Oral Disease
4. Oral Health Resources and Workforce

In coordination with state, local, and community partners, the Department will work towards accomplishing these recommendations over the next five years.

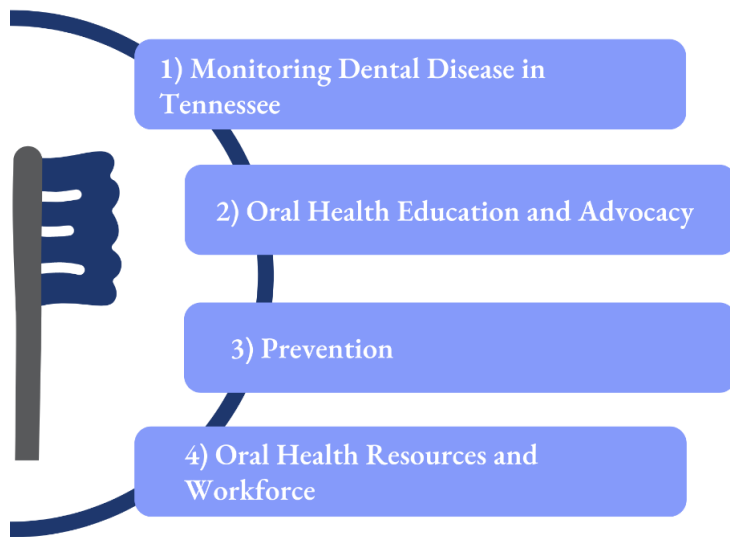
Future of the State Oral Health Plan

The Tennessee Department of Health will continue to serve as a state leader working to improve the oral health of Tennesseans. Guided by the State Oral Health Plan, the Department has a clear course of action to further its work in oral health over the next five years.

Tennessee State Oral Health Plan Purpose and Department Review

The State Oral Health Plan is a five-year comprehensive plan used to direct skilled personnel and funding decisions to reduce the prevalence of oral disease and enable the state to compete more effectively for funding resources and opportunities. In 2017, the Tennessee Department of Health Division of Health Planning issued the first five-year State Oral Health Plan as authorized under TN Code § 68-1-305 (Appendix A).

The 2017 Oral Health Plan focused on upstream oral health prevention and health care service and workforce development and built upon the work of past years (Appendix B). Guided by an advisory committee and public meetings, the 2017 State Oral Health Plan outlined recommendations in four key areas 1. Monitoring Dental Disease in Tennessee, 2. Oral Health Education and Advocacy, 3. Prevention, and 4. Oral Health Resources and Workforce.



2017 State Oral Health Plan Focus Areas

Past Oral Health Plan Accomplishments

Since 2017, the Department has worked towards accomplishing the recommendations set forth in the first State Oral Health five-year plan.¹ Accomplishments include:

- Monitoring Dental Disease in Tennessee
 - Developed and updated an oral health data source grid²
 - Established a survey committee for planning an oral health surveillance system
 - Participated in the Tennessee Cancer Coalition (TC2) workgroup and identified collaborative opportunities with existing and new efforts outlined in the State's Cancer Plan to enhance the craniofacial health outcomes in Tennessee.

¹ Tennessee Department of Health. (2017). Tennessee State Oral Health Plan. Retrieved from <https://www.tn.gov/health/health-program-areas/oralhealth/state-oral-health-plan.html>

² Tennessee Department of Health. Tennessee Oral Health Data Resource Grid. Retrieved from <https://www.tn.gov/health/health-program-areas/oralhealth/state-oral-health-plan/oral-health-resources-and-workforce-updates/oral-health-data-resources.html>

- Oral Health Education and Advocacy
 - Raised dental provider awareness of their role in substance abuse prevention by printing and distributing National Safety Council Drug cards and providing on-going continuing education
 - Received funding from the TC2 Tobacco Prevention and Cessation project to address primary prevention of cancer and distributed statewide materials and resources through the School Based Dental Prevention Program (SBDPP)
 - Worked with community partners to increase public awareness of the impact of diet and sugary drinks on oral health including through participating in the Middle Tennessee Oral Health Coalition (MTOHC)
 - Worked with chronic disease prevention programs to develop messaging and an education course for healthcare providers
- Prevention
 - Organized state-wide information and supported meetings with community stakeholders to raise awareness of the benefits of community water fluoridation including hosting train-the-trainer events with the American Fluoridation Society and presenting a report from the Tennessee Department of Health Fluoridation Workgroup to the Commissioner of Health
 - Continued providing Silver Diamine Fluoride (SDF) treatments through the School Based Dental Prevention Program, with over 7,441 students receiving treatment on 26,791 teeth since program implementation.
 - Collaborated with DentaQuest to create “lift the lip” brochures for educational purposes.
- Oral Health Resources and Workforce
 - Mapped existing providers, activities, and services of oral health efforts for public and provider use³
 - Successfully completed a teledentistry pilot project in the Upper Cumberland region of Tennessee
 - Raised awareness of the Centers for Disease Control and Prevention *Summary of Infection Prevention Practices in Dental Settings*⁴
 - Raised awareness of the American Dental Association (ADA) Center for Evidence-Based Dentistry Guidelines⁵



Since implementing Silver Diamine Fluoride treatment in the school-based Dental Prevention Program, over 7,441 students have received treatment on 26,791 teeth.

³ Tennessee Department of Health. Dental Care for Tennesseans Map. Retrieved from <https://www.tn.gov/health/health-program-areas/oralhealth/dental-care-for-tennesseans.html>

⁴ Tennessee Department of Health. Infection Control in Dental Settings. Retrieved from <https://www.tn.gov/health/health-program-areas/oralhealth/professionals/infection-control.html>

⁵ Tennessee Department of Health. Evidence-Based Dentistry. Retrieved from <https://www.tn.gov/health/health-program-areas/oralhealth/professionals/evidence-based-dentistry.html>

The Importance of Oral Health

Oral health plays a key role in determining an individual's quality of life. Poor oral health can influence an individual's self-esteem, school performance, ability to obtain employment, and school and work attendance. According to the American Dental Association's Health Policy Institute report titled "Oral Health and Well-Being in Tennessee," 70% of Tennesseans report cost as the reason for not visiting the dentist (Appendix C). Tooth decay is one of the most common chronic conditions throughout the United States, and oral disease has been linked with other chronic diseases such as diabetes and heart disease.⁶

Transmission of Dental Caries Bacteria

By definition, dental caries is an infectious and transmissible disease caused by bacteria colonizing the tooth surfaces.⁷ As early as 1996, the CDC released a bulletin stating dental caries may be the most prevalent of infectious diseases that affect humans. Research shows that one of the major decay-causing bacteria can be easily spread from a mother or caregiver to a small child. Dental health experts have concluded that several acts performed by well-meaning parents can transmit decay-causing bacteria to young children including sharing an eating utensil, sharing drinking cups, and licking a baby's pacifier to clean it.⁸

Infections, Dry Mouth, Prescriptions, and Over the Counter Medications

Dental-related acute head and neck infections pose a challenge to healthcare providers and carry a significant risk of morbidity and mortality due to the proximity to the upper airway. If these infections are not managed properly complications may occur from which the patient may not recover.⁹

Over 24 million Americans have asthma, a chronic lung disease that usually develops in childhood. This condition can put persons at risk for various dental problems such as dry mouth, cavities, and oral sores.¹⁰ Asthma medications such as antihistamines and decongestants can block the release of saliva, resulting in xerostomia (dry mouth). Chronic dry mouth may increase the chance of dental disease, including tooth decay. Preventive measures should be put in place to offset the lack of saliva flow in the mouth. Additionally, medications in the form of syrups may be highly acidic which can damage the tooth structure.

⁶ "Oral Health Basics". Centers for Disease Control and Prevention, updated October, 8, 2015. <https://www.cdc.gov/oralhealth/basics/index.html>. Accessed August 2022.

⁷ Caufield PW, LiY, Dasanayake A, "Dental caries: an infectious and transmissible disease", Compendium Continuing Education in Dentistry. 2005 May; 26(5 Supple 1): 10-6.

⁸ "Is Tooth Decay Contagious?". Campaign for Dental Health. American Academy of Pediatrics. February 18, 2014. <http://ilikemyteeth.org/tooth-decay-contagious/>. Accessed August 2022

⁹ Amponsah EK, Donkor P. Life-Threatening Oro-Facial Infections. Ghana Medical Journal 2007 Mar; 41(1): 33-36. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1890536/> Accessed August 2022

¹⁰ "Asthma & Your Oral Health". Delta Dental. Revised April, 2016. https://www.deltadentalins.com/oral_health/asthma-and-oral-health-8x11.pdf. Accessed August 2022.

Diet and Nutrition and Oral Health

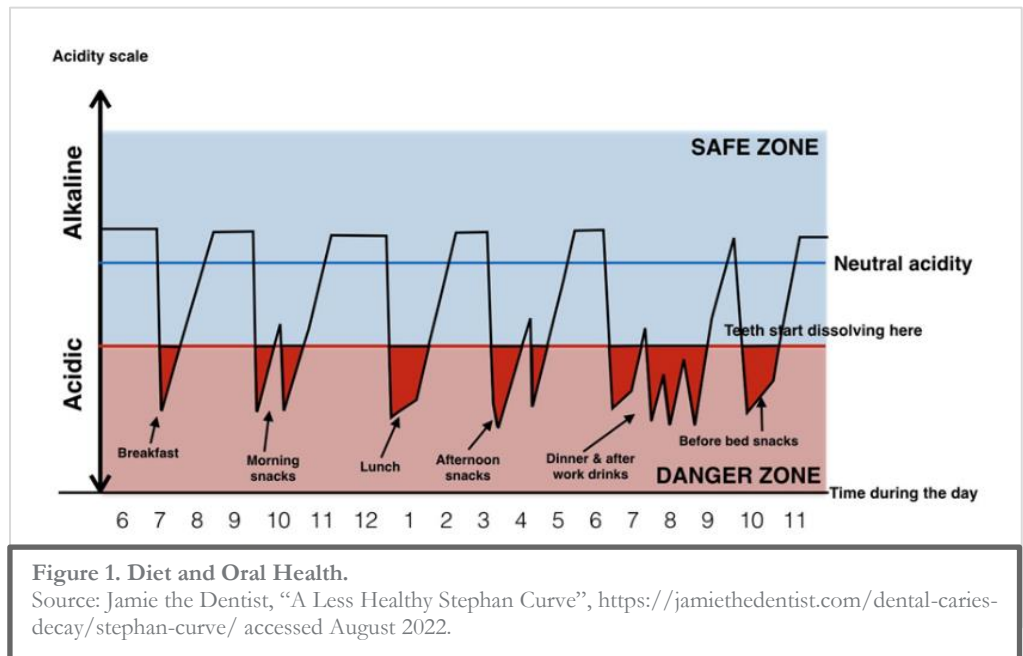
A balanced, nutritious diet is essential to healthy living and prevents tooth decay and gum disease.¹¹ Establishing healthy eating habits and oral health habits plays a significant role in the prevention of dental decay.¹² Management of sugary drinks, snacking, and oral care is essential to reduce risk of tooth decay (Figure 1).

The pH of a healthy mouth is 7.1. While the body has ways of regulating this pH, certain foods and beverages increase the acidity of the mouth by dropping the pH level to a more destructive level of 4.5. Consumption of sugary drinks (sodas, energy drinks, sugar-sweetened beverages) and sugar-sweetened foods and carbohydrates, makes tooth decay more likely to occur.

The formation of decay is the result of a process known as demineralization (red area, figure 4). The counter process to demineralization is remineralization (blue area, figure 4), where the tooth surface is given the opportunity to re-strengthen or re-mineralize.

These two processes have a crucial impact on the hardness and strength of tooth enamel, which is the hardest structure in the body. The battle to keep teeth strong and healthy is dependent upon the balance between demineralization and remineralization; the presence of saliva influences this process. Understanding this relationship and the process of demineralization and remineralization will aid in fighting the battle of dental decay.

Maintaining a healthy diet that limits snacking and intake of sugary beverages will prevent chronic conditions such as obesity and diabetes, and also helps preserve a healthy mouth. Parents and caregivers have a unique opportunity to model this behavior for children to ensure they get a healthy start to life. Another important step that can be taken to improve the health of children is introducing water during a child’s early years and continuing to make water the beverage of choice. This focus on a healthy diet provides a strong foundation for a future with improved overall health for children and adults alike.



¹¹ “Mouth Happy”. American Dental Association. <http://www.mouthhealthy.org/en/nutrition>; accessed August 2022

¹² “Mouth Happy”. American Dental Association. <http://www.mouthhealthy.org/en/nutrition>. accessed August 2022

Oral Health and Chronic Disease

The 2003 World Oral Health Report acknowledged that the evidence is clear, oral health and general health are closely related.¹³ Since that report, we have realized oral health and general health are linked in four major ways:

1. Poor oral health is significantly associated with major chronic diseases.
2. Poor oral health causes disability.
3. Oral health issues and major diseases share common risk factors.
4. General health problems may cause or worsen oral health conditions.¹⁴

Many studies show an association between poor oral health and chronic diseases such as cardiovascular disease, diabetes, respiratory diseases, stroke, kidney disease, dementia, and obesity (Figure 2). Because oral diseases and chronic diseases have many determinants in common, inter-professional efforts to address the mouth-body connection should be strengthened.¹⁵

Substance Abuse

In 2009, for the first time in U.S. history, drug overdose deaths outnumbered deaths resulting from motor vehicle crashes. Since 2009, this number has continued to increase. The number of drug overdose deaths have quadrupled since 1999. Of the 70,630 overdose related deaths in 2019, over 70% involved an opioid. There was a 5% increase in these deaths from 2018 to 2019.¹⁶

Prescription drug abuse is an epidemic that has impacted and complicated the practice of dentistry. The dental professional has the challenge of providing pain relief for their patients, while minimizing the potential of prescription drug abuse. Striking this balance has changed practice standards for the dental provider, where the treatment of choice must be more effective and safer for the patient.

Primary Prevention and Community Water Fluoridation

Primary “upstream” prevention considers how to prevent an issue from occurring rather than focusing on tertiary prevention or treatment. In moving along the spectrum from tertiary prevention to primary prevention, greater efforts are focused on preventing diseases and health issues from developing. This shift to primary prevention is accomplished by addressing root causes as opposed to focusing solely on treating symptoms of a greater problem. In addition to improving health, prevention is also a cost-saving mechanism. By focusing efforts on lower-cost preventive measures, such as community water fluoridation, the health enterprise can decrease the amount it spends on treating chronic disease (Figure 3).

¹³ The World Oral Health Report 2003. Continuous improvement of oral health in the 21st century- the approach of the WHO Global Oral Health Programme.

¹⁴ “Links Between Oral Health and General Health the Case For Action”. Dental Health Services Victoria. November 7, 2011. links-between-oral-health-and-general-health-the-case-for-action.pdf (dhs.v.org.au) accessed August 2022.

¹⁵ Sheiham A. Oral Health, general quality of life. Bulletin of the World Health Organization. 2005 Sep; 83:9. http://www.scielosp.org/scielo.php?pid=S0042-96862005000900004&script=sci_arttext&tlng=pt. Accessed April 2017.

¹⁶ Sheiham A. Oral Health, general quality of life. Bulletin of the World Health Organization. 2005 Sep; 83:9. http://www.scielosp.org/scielo.php?pid=S0042-96862005000900004&script=sci_arttext&tlng=pt. Accessed April 2017.

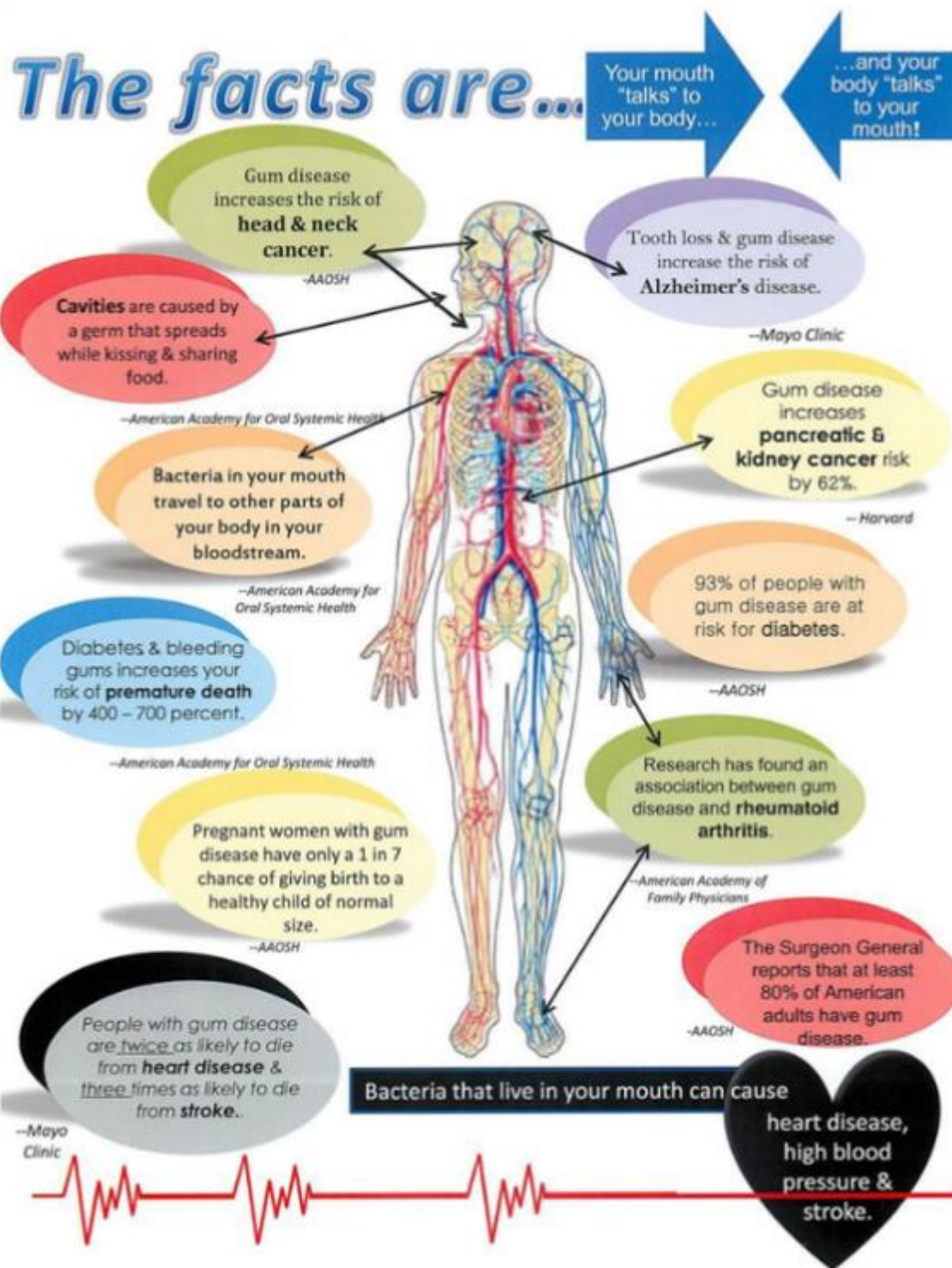


Figure 2. Oral Health and Overall Wellness

Source: American Academy of Oral Systemic Health, <https://www.heritagedentalva.com/files/2014/03/infographic-oralsystemichealth.jpg>, accessed August 2022.

Communities Benefit from Water Fluoridation

Water fluoridation is safe, effective, and saves communities money.

On average, communities with water fluoridation experience:

25% fewer cavities than communities without water fluoridation leading to:

- Less pain
- Less fillings and teeth pulled
- Less missed days of school and work



\$20
A return of for every \$1 invested

- Less expensive dental treatments needed
- Saves communities and families money



Water fluoridation improves oral health and reaches everyone in the community.

Visit www.cdc.gov/fluoridation for information about community water fluoridation.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

03/08/23-C

Figure 3: CDC Community Water Fluoridation Infographic
Source: Community Water Fluoridation (cdc.gov) Accessed August 2022.

Community water fluoridation is the adjustment of the natural fluoride concentration of water to the level recommended for optimal dental health. Fluoride is naturally present in all foods and beverages, in varying concentrations. Fluoride at the recommended optimal level is incorporated into the surface of teeth making them more decay resistant.

Historically, Tennessee has voluntarily led the way in community water fluoridation. In 2004, 95 percent of Tennesseans served by community water systems received optimally fluoridated water, and Tennessee was ranked seventh in the nation for water fluoridation. In recent years, many of the local systems have chosen to discontinue water fluoridation. As a result, Tennessee now ranks 17th in the nation with 88 percent of those on community water systems receiving optimally fluoridated water (Figure 4).

“Community water fluoridation is recommended by nearly all public health, medical, and dental organizations including the American Dental Association, American Academy of Pediatrics, US Public Health Service, and World Health Organization. Because of its contribution to the dramatic decline in tooth decay in the United States since the 1960s, the Centers for Disease Control and Prevention named community water fluoridation one of 10 great public health achievements of the 20th century.”

- Centers for Disease Control and Prevention, 2015

Community water fluoridation is the most effective and economical way to prevent tooth decay for all ages delivering benefits to everyone in a community, regardless of their age, income, or education. Over 75 years of scientific evidence has consistently shown that community water fluoridation is both safe and effective with studies proving that water fluoridation reduces dental decay by 20 to 40 percent.

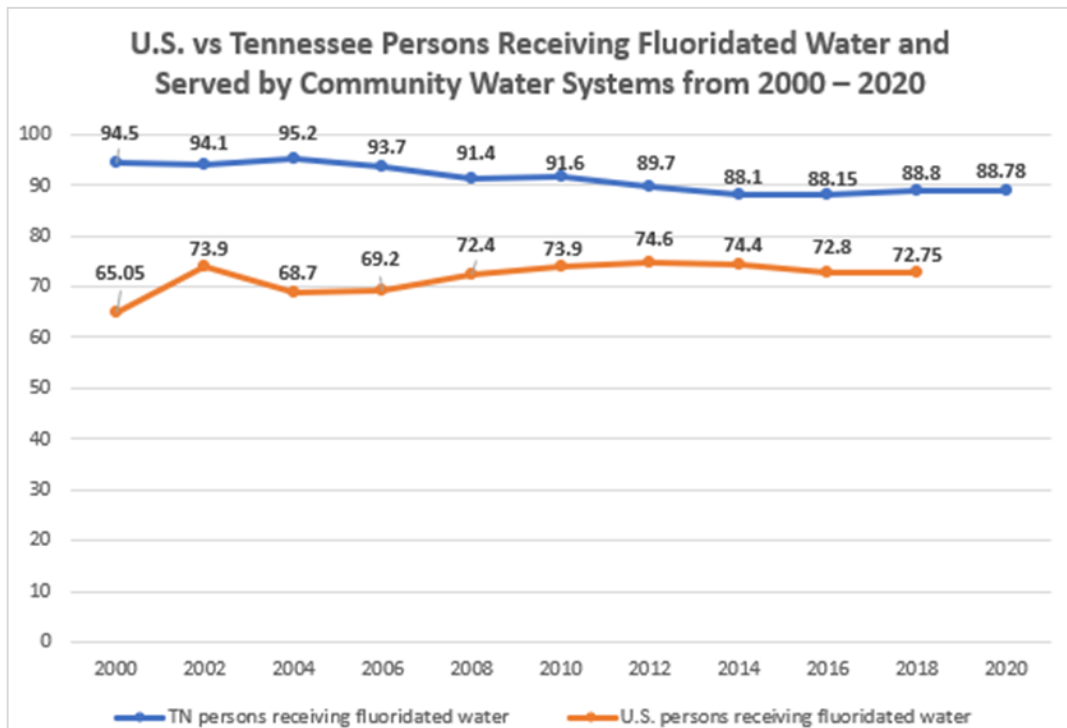


Figure 4. Fluoridated Water Systems in Tennessee.
 Data Source: <https://www.cdc.gov/fluoridation/statistics/index.html>;
<https://www.cdc.gov/fluoridation/data-tools/reporting-system.html>

The Role of the Tennessee Department of Health in Providing Oral Health Services

Oral Health Services, a division within Tennessee Department of Health, provides programs for the prevention of oral disease and education of the public regarding the value of good oral health. In addition, the program identifies those without access to dental care and attempts to assure basic care, as well as care for acute dental issues. The division has identified key objectives that are pursued in partnership with local and metro health departments and Tennessee Coordinated School Health.

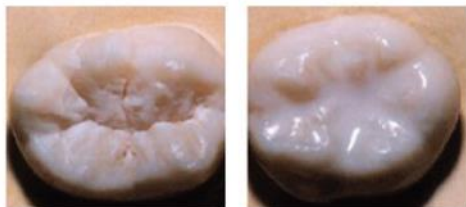
Oral Health Services Objectives

- To encourage all community water systems in the State to initiate or continue fluoridation
- To provide information and support to state and county officials, as well as the general public on community water fluoridation
- To provide school-age children with oral disease prevention and control programs that include school-based:
 - Screening and referral of children needing dental care
 - Pit and fissure sealant, fluoride varnish applications, and silver diamine fluoride applications
 - Oral health education
- To provide oral health screenings and fluoride varnish applications for children in all 126 public health departments across the state by Public Health Nurses
- To provide technical assistance and help coordinate statewide public health dental clinics that provide dental care to segments of the population that have difficulty accessing care

School Based Dental Prevention Program

The School Based Dental Prevention Program (SBDPP) is a state-wide preventive dental program operating in public schools where at least 50 percent of the student body receives free and reduced lunch. The program targets all kindergarten through eighth grade students. Dental staff utilizes portable equipment to provide free dental screening and referrals to address unmet dental needs in this population. Health education, preventive sealants, fluoride varnish, and silver diamine fluoride (SDF) are also provided. Additionally, staff provides the student's guardians with information regarding TennCare eligibility and the application process. In September 2016, the Tennessee Department of Health's School Based Dental Prevention Program was selected by the Association of State and Territorial Dental Directors as a Best Practice Project. The Tennessee Department of Health SBDPP has placed over 4 million sealants on children in Tennessee schools since 2001.¹⁷ Since the implementation of SDF in 2019, over 7,000 students have treatment on more than 26,000 teeth.

SEALANTS



Unprotected
No Sealant

Protected
After Sealant

SILVER DIAMINE FLUORIDE (SDF)



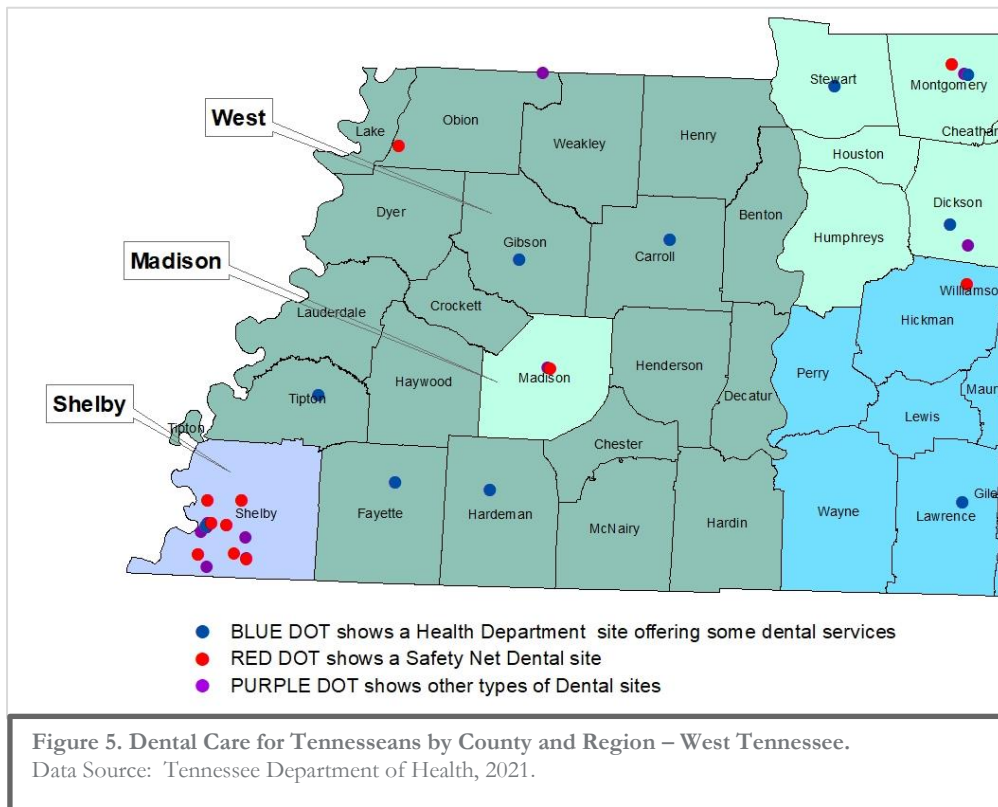
Active Decay

Non-Active Decay

¹⁷ To access the report, visit <http://www.astdd.org/state-activities-descriptive-summaries/?id=230>.

Local Health Departments

Public health dental clinics provide clinical dental services to segments of the population that would otherwise not receive care. The clinics provide dental services for children under the age of 21 that are enrolled in TennCare and children who are uninsured. The clinics also provide emergency care and are expanding to basic dental care for uninsured adults. Dental clinics housed within local health departments are located in 45 of 89 rural counties and in four of the six metropolitan regions (Figure 5, 6, 7). Clinical dental services are provided on a part-time or full-time basis, depending on the location. Specific information on availability of services or eligibility guidelines can be obtained from the local health department in the county of interest. The Public Health Nurse’s Fluoride Varnish Program is offered in all 95 counties at the 126 public health departments across the state. The nurses provide oral health screenings and fluoride varnish applications for children ages 0 to 21.



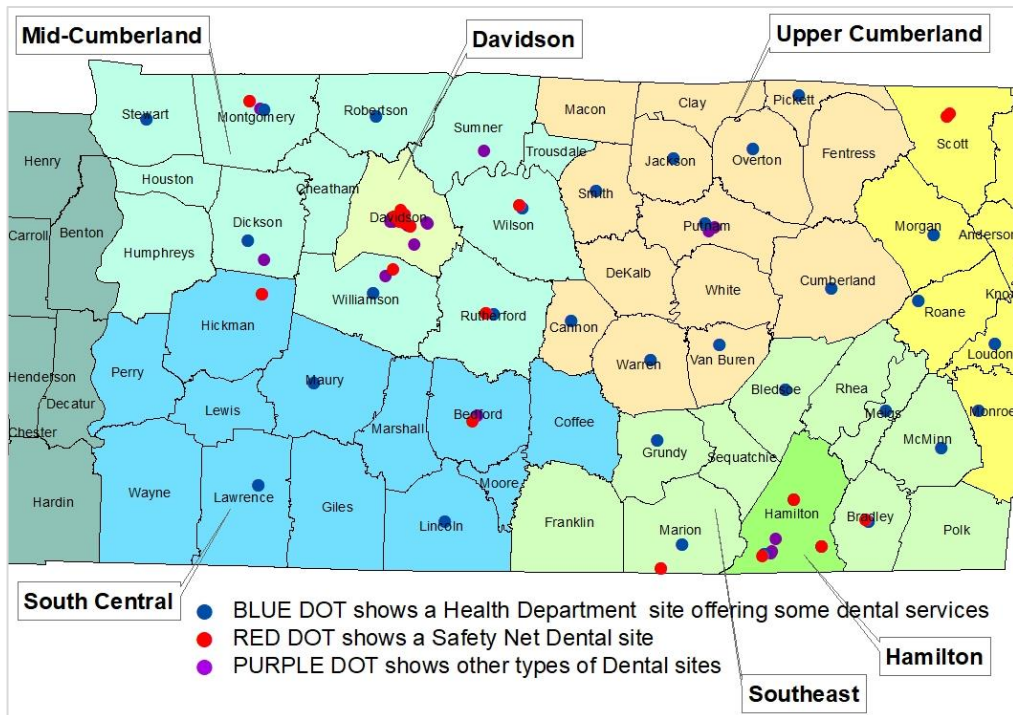


Figure 6. Dental Care for Tennesseans by County and Region – Middle Tennessee.
 Data Source: Tennessee Department of Health, 2021.

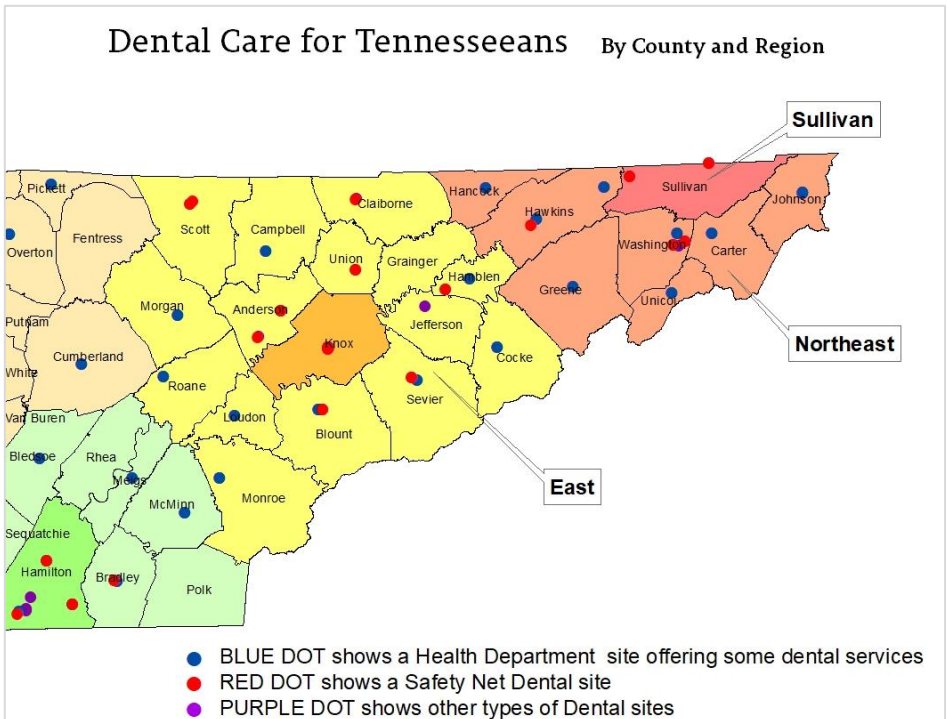
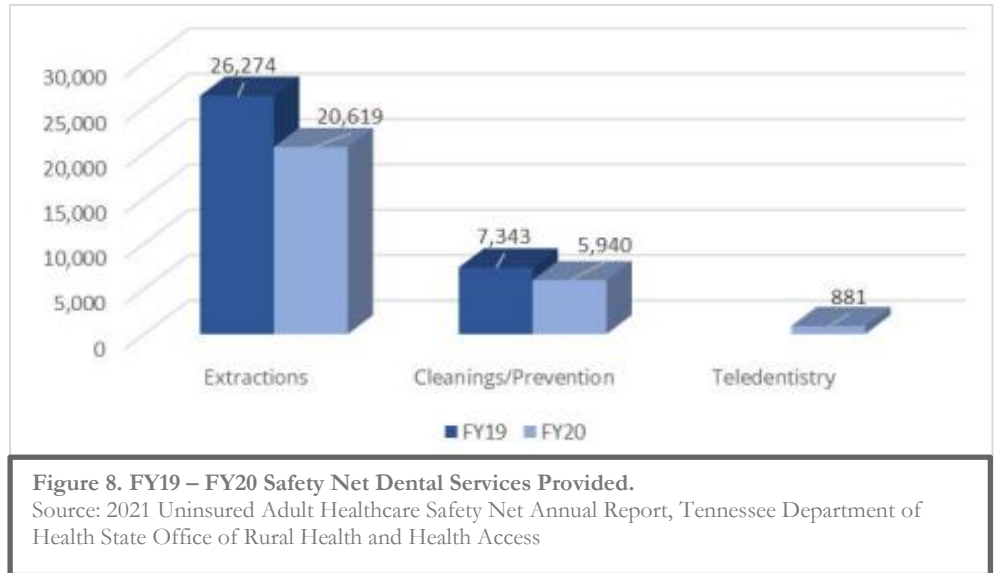


Figure 7. Dental Care for Tennesseans by County and Region – East Tennessee.
 Data Source: Tennessee Department of Health, 2021.

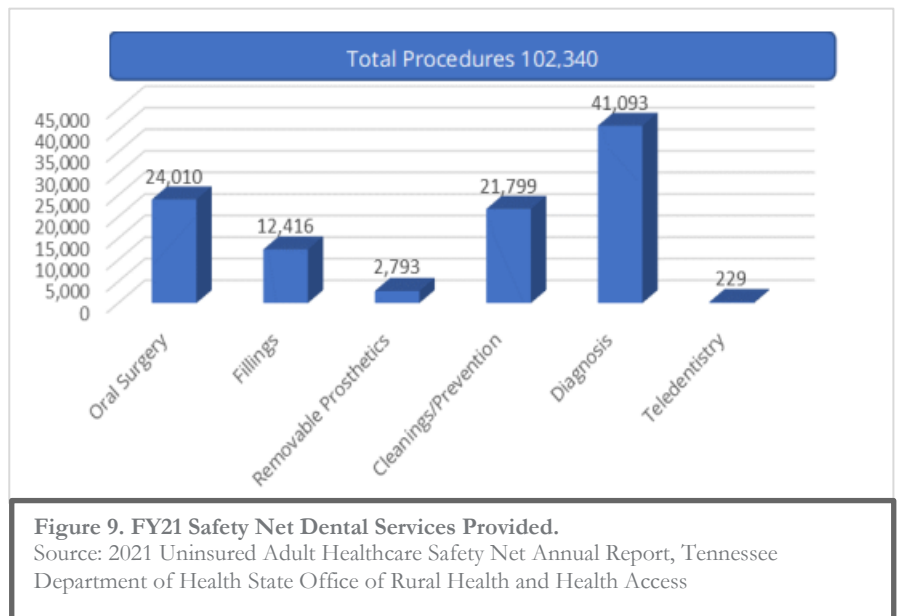
Funding for Safety Net Providers

In 2008, as part of its Safety Net investments and in recognition of the shortage of oral health care for the uninsured in Tennessee, Tennessee Department of Health initiated a dental safety net program for emergency dental services for uninsured adults ages 19 to 64. Grants were awarded to seven dental providers; emergency dental services (extractions) were provided to approximately 3,285 uninsured adults in the first year. By FY15, 17 grantees received emergency dental grant awards and provided 18,938 extractions.

In FY 2016, 20 sites were awarded approximately 1,300,000 dollars in grant funds from Tennessee Department of Health. These sites reported performing 23,857 extractions. A program expansion for hygienic cleaning and oral hygiene counseling was fully implemented for all dental grantees over a 6-month period resulting in 1,779 patient cleanings and counseling sessions in FY16. This expansion was fully implemented in FY17.



According to the 2021 Uninsured Adult Healthcare Safety Net Annual Report, “Access to oral health services is an important contributor to health and wellbeing, yet eight counties in Tennessee have no dental providers: Grainger, Grundy, Houston, Lake, Meigs, Moore, Pickett, Van Buren counties. According to the 2021 America’s Health Rankings Report, Tennessee has 48.6 dentists for every 100,000 residents, compared to the nationwide rate of 61.2 dentists per 100,000 residents, ranking Tennessee 45th among the 50 states.”¹⁸



From FY19 to FY20, the number of extractions and cleanings/prevention decreased, but teledentistry increased (Figure 8). In FY21, a total of 30 Primary Care Plus providers (11 newly funded in third quarter) received \$1,750,977 in funding to support oral health services for uninsured adults ages 19-64. Safety net dental services provided including oral surgery, filling, removable prosthetics,

¹⁸ 2021 Uninsured Adult Healthcare Safety Net Annual Report, Tennessee Department of Health State Office of Rural Health and Health Access. https://www.tn.gov/content/dam/tn/health/program-areas/reports_and_publications/SN-Report-FY21.pdf

cleanings/prevention, diagnosis and teledentistry (Figure 9). Despite a decrease in the number of unduplicated patients seen in FY20, at least partly due to the pandemic, more patients have been seen in FY21 than in FY19. (Figure 10). In FY21, a total 24,982 unduplicated patients received 102,340 procedures over 42,260 patient visits.

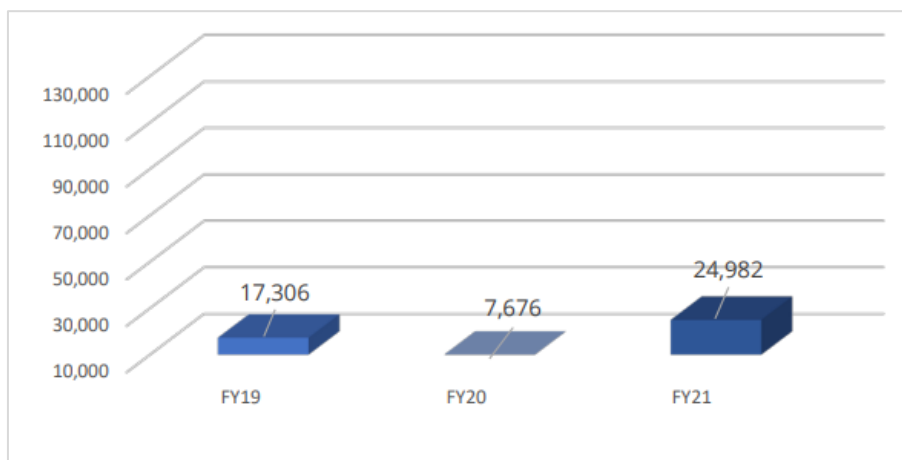


Figure 10. FY19-21 Safety Net Dental Unduplicated Patients

Source: 2021 Uninsured Adult Healthcare Safety Net Annual Report, Tennessee Department of Health State Office of Rural Health and Health Access

2022-2027 Oral Health Plan

The State Oral Health Plan offers a blueprint for improving the oral health of people in Tennessee. The plan focuses on the importance of primary prevention, working to block disease before it begins, to ensure every Tennessean has the opportunity to achieve optimal health. In 2021, the Healthy Smiles Initiative working group, which included public and private partners, issued its first report complete with recommendations and a five-year budget. This statewide working group focused on how to improve oral health in Tennessee through workforce development and expanding access to care. The 2022 State Oral Health Plan aligns with the Healthy Smiles Initiative recommendations and focuses on the Department's role in improving oral health in Tennessee.

Additionally, the Plan outlines how the Department will further its work to improve oral health in four key focus areas: 1) Access to Care, 2) Oral Health Education and Advocacy, 3) Prevention of Oral Disease, 4) Oral Health Resources and Workforce. These efforts build upon the accomplishments of the previous State Oral Health Plan and further the mission of the Tennessee Department of Health.



2022 State Oral Health Plan Focus Areas

Healthy Smiles Initiative

Under the guidance of Governor Bill Lee, in 2021 the Department convened the Healthy Smiles Working Group and issued a comprehensive five-year proposal to improve oral health in Tennessee (Appendix D). The Healthy Smiles Initiative working group included participating organizations such as TennCare, dental schools, non-Tennessee Department of Health safety net dental clinics, private sector dentists, non-profit groups, and dental payors. This working group developed recommendations to improve access to dental care in Tennessee and paid particular attention to the specific needs of rural and underserved populations. The final report issued by the Healthy Smiles Initiative included recommendations targeting the earliest stages of recruiting students into dental professions, training them to practice in underserved communities, and



In Governor Lee's fiscal year 2022 budget, the full Healthy Smiles Initiative Year 1 budget was recommended for funding, totaling \$11,868,000.00.

providing recruiting and retention incentives for service in high need populations. Recommendations also included further expanding safety net services and bolstering existing Tennessee Department of Health services and staff through offering advanced dental training for dental assistants and providing dentures in charitable care clinics. In Governor Lee's fiscal year 2022 budget, the full Healthy Smiles Initiative Year 1 budget was recommended for funding, totaling \$11,868,000.00. This initial round of funding enables the Tennessee Department of Health and fellow Healthy Smiles Initiative partners to lay the groundwork for the long road of improving the oral health of Tennesseans. Further funding allocated towards Healthy Smiles Initiative proposals is expected in the upcoming

fiscal years. In August 2022, the Tennessee Department of Health convened the first meeting of stakeholders since the conclusion of the original Healthy Smiles Initiative workgroup and since funding was allocated (Appendix E). The stakeholder group discussed funding and progress towards Healthy Smile Initiative goals, determined action steps, and set a time frame for the next meeting.

Recommendations

The Department continues its work to improve the oral health of Tennesseans. The Department has developed recommendations in four key focus areas: 1) Access to Care, 2) Oral Health Education and Advocacy, 3) Prevention of Oral Disease, 4) Oral Health Resources and Workforce. These recommendations will guide the Department's actions over the next five years and, in partnership with state, local and community partners, will guide the state towards improving the oral health of Tennesseans.

1. Access to Care



Recommendation 1: Improve Tennessee Department of Health dental clinic capacity and improve Tennessee Department of Health staffing models.

- 1.1.1 Identify service delivery barriers in Tennessee Department of Health dental clinics.
- 1.1.2 Provide incentives to establish practices in dental shortage areas across the state (loan repayment programs, funding for rural scholarships, etc.).
- 1.1.3 Assess staffing model options to address efficiency and productivity in Tennessee Department of Health dental clinics.
- 1.1.4 Expand TDH dental services to more uninsured adults.
- 1.1.5 Evaluate Tennessee Department of Health dental clinic sites for implementation of teledentistry and hub-and-spoke model.

Recommendation 2: Promote adult oral health benefits in the Tennessee Medicaid Programs and expand efforts to insure persons without dental coverage.

- 1.2.1 Promote adult oral health benefits in the Tennessee Medicaid Program.
- 1.2.2 Expand efforts to educate persons about dental coverage options.
- 1.2.3 Use innovative outreach methods to educate the public on the benefits of dental care.
- 1.2.4 Support TennCare pediatric dental home efforts by referral and care coordination of children to the TennCare pediatric dental network

Recommendation 3: Assess options and need for a Tennessee Department of Health oral health surveillance system.

1.3.1 Add questions to existing surveys (Behavioral Risk Assessment Surveillance System – BRFSS, etc. on barriers to accessing dental care.

1.3.2 Collaborate with other dental programs that currently collect oral health data.

1.3.3 Assess existing data resources on state and national levels.

1.3.4 Assess Tennessee Department of Health resources to provide technical support and expertise in development of an oral health surveillance system.

Recommendation 4: Raise awareness and support utilization of Community Dental Health Coordinators (CDHCs).

1.4.1 Assess the opportunities and utilization of CDHCs in Tennessee Department of Health’s existing dental programs.

1.4.2 Support opportunities for CDHC training within Tennessee dental education facilities.

1.4.3 Inform Tennessee Department of Health dental staff and care partners of educational opportunities and the role of CDHCs.

1.4.4 Provide CDHC training opportunities via the Healthy Smiles funding initiative



2. Oral Health Education and Advocacy

Recommendation 1: To raise awareness of the importance of oral health to overall health.

2.1.1 Promote the importance of oral health to overall health using innovative outreach methods.

2.2.1 Promote oral health awareness and dental visits during pregnancy through County Health Departments and other non-profits.

2.3.1 Partner with Tennessee Department of Health primary care sites to encourage patient education and referrals to Tennessee Department of Health dental clinics.

Recommendations 2: Raise dental provider awareness of their role in substance abuse prevention.

2.2.1 Provide continuing education opportunities for dental staff and stakeholders in substance abuse prevention and prescription writing guidelines.

2.2.2 Add educational information to Tennessee Department of Health Oral Health Services website related to substance abuse prevention.

2.2.3 Use innovative outreach methods to raise awareness and to encourage dentists to use the Controlled Substance Monitoring Database Program (CSMD).

Recommendation 3: Work with existing prevention programs for public awareness of the effects of tobacco in the oral cavity.

2.3.1 Assess statewide tobacco usage data to target interventions and educational outreach.

2.3.2 Add educational information to Tennessee Department of Health Oral Health Services website related to tobacco and oral health.

2.3.3 Add tobacco education in the statewide School Based Dental Prevention Program.

Recommendation 4: Work with community partners to increase public awareness of the impact of diet on oral health.

2.4.1 Provide education in the statewide School Based Dental Prevention Program to increase awareness of the impact of diet on oral health.

2.4.2 Provide educational resources on the Tennessee Department of Health Oral Health Services website related to the impact of diet on oral health.

2.4.3 Assess opportunities to partner with stakeholders and other agencies to raise public awareness of the impact of diet on oral health.

3. Prevention of Oral Disease



Recommendation 1: Encourage greater use of sealants by dental providers to prevent pit and fissure caries in permanent molar teeth of children.

3.1.1 Provide educational resources about sealants on Tennessee Department of Health Oral Health Services website.

3.1.2 Seek opportunities to educate caregivers and providers on the benefits of sealants.

3.1.3 Seek opportunities to partner with dental training programs to emphasize the impact of sealants.

Recommendation 2: Expand existing School Based Dental Prevention Program.

3.2.1 Work with funding source to expand staff for the School Based Dental Prevention Program.

3.2.2 Increase the number of children served by the School Based Dental Prevention Program through assessment and implementation of an improved staffing model.

3.2.3 Research and evaluate prevention options for inclusion in the School Based Prevention Program.

Recommendation 3: Continue to research and advocate for newly approved products and techniques to improve and/or arrest dental decay.

3.3.1 Educate caregivers and providers on the benefits of newly approved products and techniques.

3.3.2 Increase use of Silver Diamine Fluoride in the School Based Prevention Program and Tennessee Department of Health dental clinics.

3.3.3 Provide educational resources about Silver Diamine Fluoride and other newly approved products on the Tennessee Department of Health Oral Health Services website.

Recommendation 4: Organize state-wide information and raise awareness of the benefits of community water fluoridation.

3.4.1 Provide customer-focused information about community water fluoridation on the Tennessee Department of Health Oral Health Services website.

3.4.2 Increase education on community water fluoridation in the School Based Dental Prevention Program.

3.4.3 Strengthen partnerships with local community water systems.



4. Oral Health Resources and Workforce

Recommendation 1: Develop and research opportunities to enhance professional integration between oral health providers and medical providers.

4.1.1 Assess current oral health integration in medical schools in Tennessee.

4.1.2 Work with stakeholders to promote fluoride varnish applications by medical providers.

4.1.3 Research and assess statewide and national integrated care models.

Recommendation 2: Expand partnerships with dental training programs.

4.2.1 Assess and identify dental training programs that offer interprofessional experiences for their residents on a state and national level.

4.2.2 Share interprofessional program best practices with stakeholders.

4.2.3 Increase collaborative efforts between Tennessee Department of Health Oral Health Services and dental training programs.

4.2.4 Provide training opportunities for dental students and residents at Tennessee Department of Health and Safety Net clinics

4.2.5 Support dental and hygiene school expansion efforts in Tennessee.

Recommendation 3: Actively seek funding for Tennessee Department of Health dental clinics to expand the targeted population to include uninsured adults and partner with Safety Net Clinics to expand their oral health reach.

4.3.1 Develop and maintain a database of oral health grant opportunities and share with stakeholders.

4.3.2 Evaluate opportunities and apply for grant funding that aligns with Tennessee Department of Health Oral Health Services goals.

4.3.3 Educate providers and assess expansion options for the Smile on 65+ program in Tennessee Department of Health dental clinics.

Recommendation 4: Request Tennessee Department of Health - Health Related Boards collect information on practicing status of dentist and hygienist during licensure and license renewal.

4.4.1 Evaluate current data and assess the need for data collection changes.

4.4.2 Create map of Tennessee dental providers using information from the Tennessee Board of Dentistry to be shared with stakeholders.

Recommendation 5: Map existing dental resources for public and provider use.

4.5.1 Maintain and distribute a list and map of dental care resources for Tennesseans on Tennessee Department of Health Oral Health Services website.

4.5.2 Use innovative outreach methods to raise awareness of dental care resources for Tennesseans.

The Future of Oral Health in Tennessee

While the presence of oral disease and limited access to care remain challenges across Tennessee, significant work is being done to improve oral health and oral health care access. The Tennessee State Oral Health Plan outlines the work that will be done over the next several years. Through the Healthy Smiles Initiative, public and private partners will continue to work together to expand Tennessee's dental care workforce and improve access to care. While the Department is continuing to be a key player in the Initiative and galvanizing partners across the state, the Department is dually focused on its work to improve oral health in Tennessee by prioritizing access to care, education and advocacy, prevention of oral disease, and workforce development and resources. Over the next five years, the Department of Health will continue working with partners and seeking support from state leadership to improve the oral health of Tennesseans. The recommendations outlined in this plan will guide the Department and its partners towards a brighter future for the oral health of Tennesseans.

Appendix

Appendix A. TN Code § 68-1-305

TN Code § 68-1-305. Comprehensive state oral health plan.

(a) The commissioner of health is authorized to develop a comprehensive state oral health plan. The plan may be used to direct skilled personnel and funding decisions in order to reduce the prevalence of oral disease. The plan may enable the state to compete more effectively for funding resources and opportunities.

(b) The commissioner may develop the plan in consultation with public and private agencies, partners, and stakeholders, including the state oral health coalition and members of the public health, dental, and medical communities.

(c) The plan may:

- (1) Include state-specific data;
- (2) Be maintained in a current and relevant form with updates every five (5) years;
- (3) Be distributed broadly to public partners and policymakers; and
- (4) Provide specific, measurable, achievable, relevant, and time-framed (S.M.A.R.T.) objectives.

(d) The plan may also include:

- (1) A logic model;
- (2) A strong infrastructure;
- (3) Accessibility to current resources;
- (4) Identified knowledge gaps in resources and recommendations for eliminating those gaps;
- (5) Healthy People 2020 oral health objectives;
- (6) Identified priority populations and the burdens of oral disease;
- (7) Identified partners with the ability to leverage resources;
- (8) A communication plan for addressing new or emerging oral health knowledge specifically for:
 - (A) Dental caries;
 - (B) Water fluoridation; and
 - (C) School-based or school-linked dental sealant programs;
- (9) Programs to address oral cancer and periodontal diseases;
- (10) Efforts to address infection control in dental settings;
- (11) Evaluation activities at the initiation of the planning process that involve recommendations for types of evaluation and plans for monitoring outcomes related to plan implementation;
- (12) Identified best practices for replication of program implementation; and
- (13) A proposal that identifies the process for updating the plan as required by this section.

Appendix B: Tennessee Oral Health Timeline

1924-1928: Commonwealth Fund Child Health Demonstration's (CHD) study of children from Rutherford County, Tennessee, between 1924 and 1928. The CHD's philanthropic venture promoted dental hygiene services during the class period.¹⁹

1928 – 1929: Dr. J.C. McGuffin was the first dentist employed by the Kingsport School System where he organized a school dental health program that consisted of inspections of students and services to indigent children.

1935: The dental health program of the Tennessee Department of Health was established as one of the first dental public health programs in the United States. Dr. Oren A. Oliver was the first dental representative to the Tennessee Public Health Council as an advisory member. He later organized the Dental Hygiene Service in the Tennessee Department of Public Health.²⁰

1937: A cooperative dental program designed to provide treatment by private dentists to elementary school children of low-income families was started. This program was financed by Tennessee Department of Health with matching local funds. During its first year of operation, 138 dentists provided dental treatment to more than 25,000 children in 1,947 schools in 51 of the state's 95 counties. A first of its kind annual postgraduate dental seminar series was established and co-sponsored by the Tennessee Department of Public Health and the Tennessee State Dental Association.

1945: The Tennessee Department of Health produced an animated color film entitled, "Winky the Watchman". Since its debut the film was viewed by millions of school children across the United States.²¹

1947: Congress appropriated \$1 million to advance the concept of topical applications of sodium fluoride as a means of preventing tooth decay. The Tennessee Department of Public Health partnered with the U.S. Public Health Service and the Chattanooga-Hamilton County Health Department to begin a research project on the use of fluoride to prevent tooth decay. A demonstration team of one dentist, two dental hygienists, and a secretary was assigned to Tennessee from 1947-1948.

1948: The U.S. Children's Bureau (now the U.S. Department of Health & Human Services) and Meharry Medical School began a project in 1947 to incorporate dental health services into Meharry's Department of Pediatrics. In 1948, the U.S. Children's Bureau established postgraduate courses in children's dentistry at the University Of Tennessee School Of Dentistry.

1951: Milan became the first city in Tennessee to fluoridate its community water supply. It was the second city in the Southeast to fluoridate.

¹⁹ For more information on the Commonwealth Fund Child Health Demonstration visit, <http://sos.tn.gov/products/tsla/dr-harry-mustard-photo-album>.

²⁰ "Tennessee Department of Public Health" is a former title for the Tennessee Department of Health.

²¹ To view the film "Winky and the Watchman" visit, <https://www.youtube.com/watch?v=h8pfXigbPRI&feature=youtu.be>.

1952: Three 'plastic' teams were organized in Tennessee to provide consultation and clinical services to the Crippled Children's Service of the Tennessee Department of Public Health in treatment of children with cleft lips and/or palates or other dentofacial disfigurements.

1953: The dental public health program was elevated to division status within the department and granted legislative authority with state appropriations included for it in the budget of Tennessee Department of Health.

1954: Tennessee was one of the first states to conduct pre-fluoridation surveys of caries prevalence among school children 6-14 years of age.

1961: The *Dental Health Guide for Teachers of Tennessee* was published by the Tennessee Department of Health Division of Oral Health. It was one of the first publications of its kind in the country and was copied by many other states.

1962: Tennessee became the first state to erect signs on highways leading into communities advertising that the public water system was approved and fluoridated.

1964: Tennessee became the first state to offer financial assistance to small communities to fluoridate their water systems. Consequently, more communities began to fluoridate, and dental caries rates began to decline.

1971: Tennessee's Medicaid program (Title XIX) began.

1972: Tennessee became the first state to bring portable dental equipment into schools to conduct pit and fissure sealant programs for children as a public health preventive measure.

1979: Tennessee became the first state to team up with the Centers for Disease Control and Prevention (CDC) to establish a National Fluoridation Training Center at the Fleming Training Center in Murfreesboro, Tennessee. Those attending the fluoridation courses have come from practically every state in the United States and many foreign countries. A cross sectional statewide dental survey of school children ages 5-19 was conducted to evaluate the dental health status of school children in Tennessee following twenty-five years of dental health programs. Results showed significant improvements in dental caries rates among school children. Decayed, missing, and filled teeth Index (DMFT) rates decreased by 54%.

1980's: Many of the clinical trials required for approval of second and third generation dental sealants were conducted in the South-Central Public Health Region of Tennessee. Also, at this time, results from national caries prevalence surveys showed marked declines in caries prevalence in the permanent and primary dentitions of U.S. children attributed to exposure to topical and systemic fluorides.

1982-94: Dental hygienists were trained by Dr. James R. Hardison in the use of pit-and-fissure sealants in community public health programs in Tennessee. He then published “The use of pit-and-fissure sealants in community public health programs in Tennessee” in the Journal of Public Health Dentistry in the summer of 1983.²²

1985: An investigation of pit and fissure sealant retention in 1,871 children in the Head Start program was conducted in Tennessee in September 1985 to determine the retention of the sealant after application to the occlusal surfaces of primary molars on 3- and 4-year-old children. The investigation showed pit and fissure sealants are retained on primary molars at a rate comparable to that expected on permanent molars.²³

1988: A third statistically valid statewide oral health survey was conducted to monitor oral disease and disease trends. Survey findings showed a 75 percent decline in tooth decay in the permanent teeth of children and a 55 percent reduction in the primary dentition compared with pre-fluoridation surveys completed in 1954. These declines are attributed to systemic (water fluoridation), and topical (toothpaste) fluoride exposure.

1992: The Oral Health Services Section of Tennessee Department of Health received funding from the Preventive Health Services Block Grant to initiate statewide sealant projects for all regions, metro and rural.

1994: Tennessee transitioned from a traditional Medicaid program to a Medicaid Managed Care program, TennCare. The TennCare program operates as a Medicaid demonstration project under the authority of an 1115 waiver from the Centers for Medicare and Medicaid Services (CMS).²⁴ TennCare is considered Medicaid managed care because the State contracts with managed care entities that bear financial risk, in the delivery of healthcare services.

LATE 1990s-early 2000s: The Smile! Tennessee Poster Contest was developed and implemented for 3rd and 4th grade students who had the opportunity to promote the principles of good oral health through their artwork.

2001: TennCare and the Tennessee Department of Health partnered through an interagency agreement to provide school-based oral disease prevention services to underserved children in grades K – 8 attending public schools where approximately 50 percent or more of the student population participates in the school lunch programs across the state. TennCare carved out its dental-benefits program from the larger TennCare program which means that the State contracts directly with a single, statewide Dental Benefits Manager (DBM) to administer the dental-benefits program versus contracting for dental services through a Medical Managed Care Company (MCO).

²² Hardison J, “The use of pit-and-fissure sealants in community public health programs in Tennessee”, J Public Health Dent. 1983 Summer, 43(3):233-9; <https://www.ncbi.nlm.nih.gov/pubmed/6355459>.

²³ Hardison J, Collier D, Sprouse L, Van Cleave M, Dea Hogan, A, “Retention of pit fissure sealant on primary molars of 3- and 4-year-old children after 1 year”, The Journal of the American Dental Association. 1987 May (114:5): 613-315.

²⁴ For more information on the TennCare 1115 Demonstration visit, <https://www.tn.gov/tenncare/policy-guidelines/tenncare-1915-c-hcbs-waivers.html>.

2004: The Governor signs legislation which amended the state Dental Practice Act to allow public health nurses in public health settings to apply fluoride varnish to the teeth of children under age 21.²⁵

2008: The Tennessee Department of Health conducted a cross-sectional Oral Health Survey of Children Ages 5 – 11 years. Findings revealed that except for dental sealant prevalence, children in the School Based Dental Prevention Program (SBDPP) (low and moderate-low socio-economic status (SES) schools were at higher risk for poor oral health outcomes when compared to children in moderate and high SES (Non-SBDPP) schools.

2013: The TennCare Partial Risk Dental Contract was implemented, with a threefold objective: first, to increase the number of children receiving dental care; second, to improve the quality of the care they received; and third, to do so in a fiscally sustainable and predictable way. State statute was amended through legislation to permit dental hygienists in state public health programs to provide oral disease prevention services such as dental screenings, dental sealants, topical fluorides (fluoride varnish), without an oral evaluation by a dentist first.²⁶

2016: The Tennessee Department of Health-Oral Health Services' School Based Dental Prevention Program was recognized as an Association of State & Territorial Dental Directors (ASTDD) Best Practice Approach for Improving Children's Oral Health through the Whole School, Whole Community, Whole Child (WSCC) Model.²⁷

2017: Over 4 million sealants placed on children in Tennessee through the School Based Dental Prevention programs started in 2001.

2018: Tennessee's first Oral Health Plan was passed in legislature.

2019: Oral Health Services began the use of Silver Diamine Fluoride (SDF).

2021: Training and strategy developed to allow dental providers to augment the administration of COVID-19 vaccinations. Governor Bill Lee requested that the Tennessee Department of Health (Tennessee Department of Health) convene a working group of stakeholders, with Commissioner Piercey as chair, to develop a comprehensive public-private partnership to broaden access to high-quality, low-cost dental care to Tennesseans. The Healthy Smiles initiative was the result of this workgroup.

2022: The Healthy Smiles Initiative and Tennessee's second state oral health plan began.

²⁵ For more information on the Nurse's Fluoride Varnish Program visit, <https://www.tn.gov/health/health-program-areas/oralhealth/oral-health-programs/fluoride-varnish-program.html>

²⁶ 2020 Tennessee Code Title 63 - Professions of the Healing Arts Chapter 5 § 63-5-109 – Dentists, <https://law.justia.com/codes/tennessee/2020/title-63/chapter-5/section-63-5-109/>. Exemptions [http://www.astdd.org/improving-childrens-oral-health-through-the-whole-school-whole-community-whole-child-\(wsc\)-model/](http://www.astdd.org/improving-childrens-oral-health-through-the-whole-school-whole-community-whole-child-(wsc)-model/).

²⁷ For more information on the Whole School, Whole Community, Whole Child model visit, [http://www.astdd.org/improving-childrens-oral-health-through-the-whole-school-whole-community-whole-child-\(wsc\)-model/](http://www.astdd.org/improving-childrens-oral-health-through-the-whole-school-whole-community-whole-child-(wsc)-model/).

Appendix C. American Dental Association’s Report: Oral Health and Well-Being in Tennessee

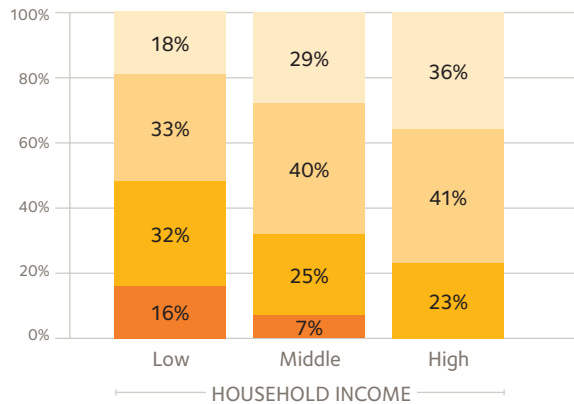
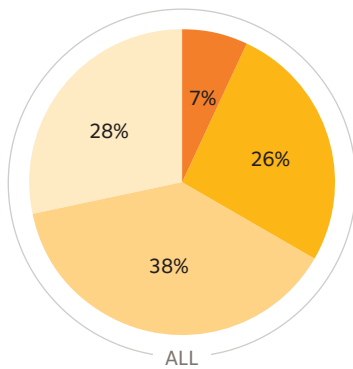
Oral Health and Well-Being in Tennessee

How do adults in Tennessee view their oral health?

This fact sheet summarizes select data on self-reported oral health status, attitudes and dental care utilization among Tennessee adults as of 2015, by income level, based on an innovative household survey. For methods and sources, visit ADA.org/statefacts. For more information on the ADA Health Policy Institute, visit ADA.org/HPI.

Overall Condition of Mouth and Teeth

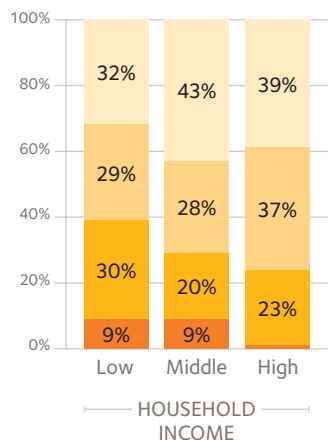
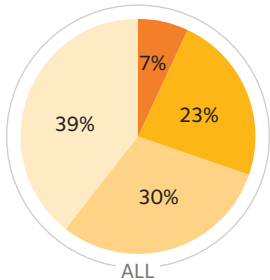
■ VERY GOOD
■ GOOD
■ FAIR
■ POOR



16% of low income adults say their mouth and teeth are in poor condition.

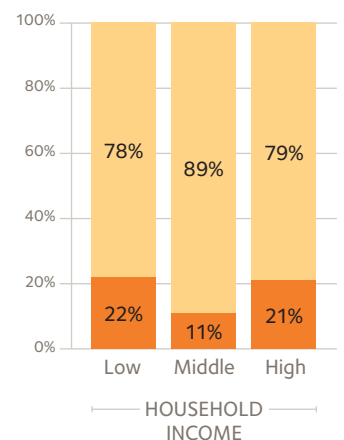
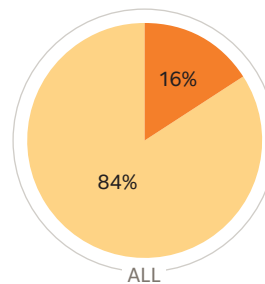
Life in General is Less Satisfying Due to Condition of Mouth and Teeth

■ NEVER
■ RARELY
■ OCCASIONALLY
■ VERY OFTEN



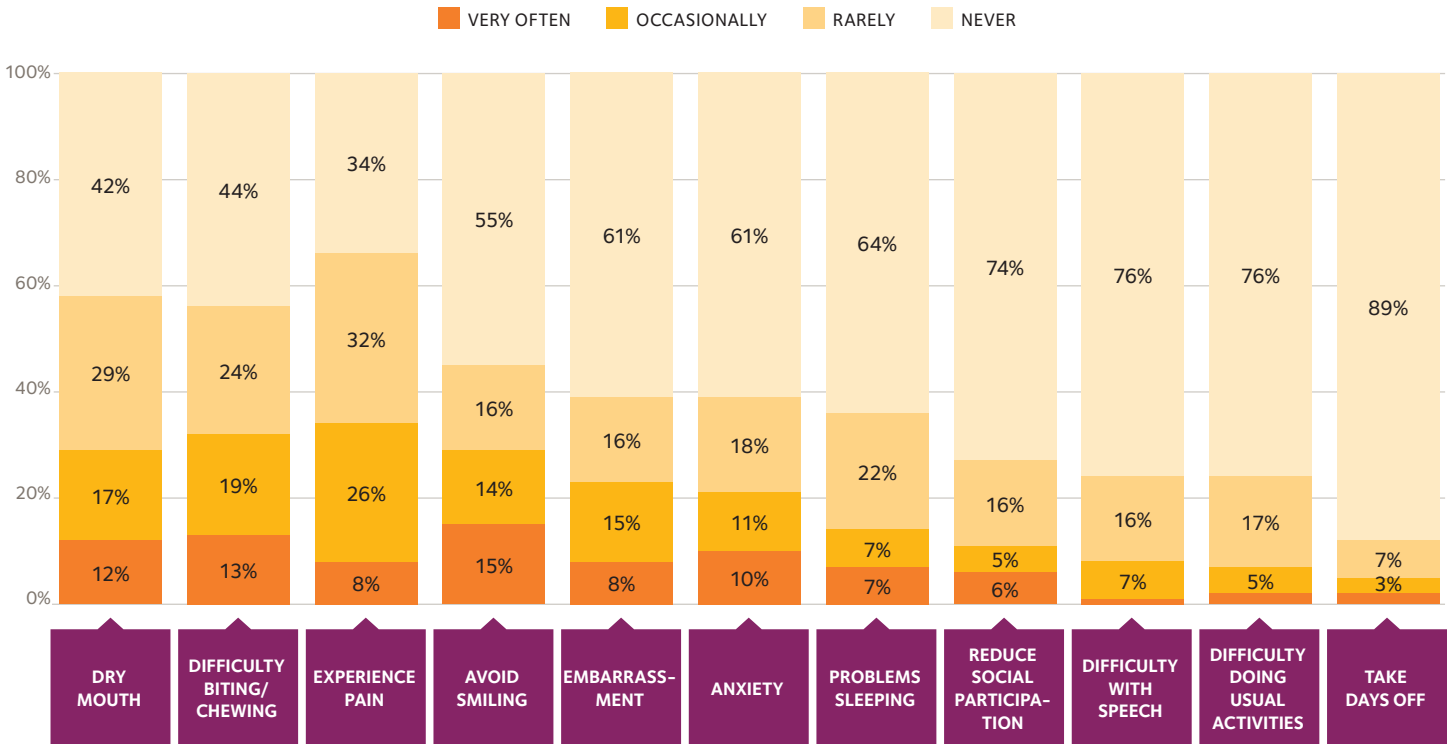
Appearance of Mouth and Teeth Affects Ability to Interview for a Job

■ YES
■ NO



Oral Health and Well-Being in Tennessee

How Often Have You Experienced the Following Problems in the Last 12 Months Due to the Condition of Your Mouth and Teeth?



3 in 10

adults **avoid smiling** due to the condition of their mouth and teeth.



23%

of adults **feel embarrassment** due to the condition of their mouth and teeth.

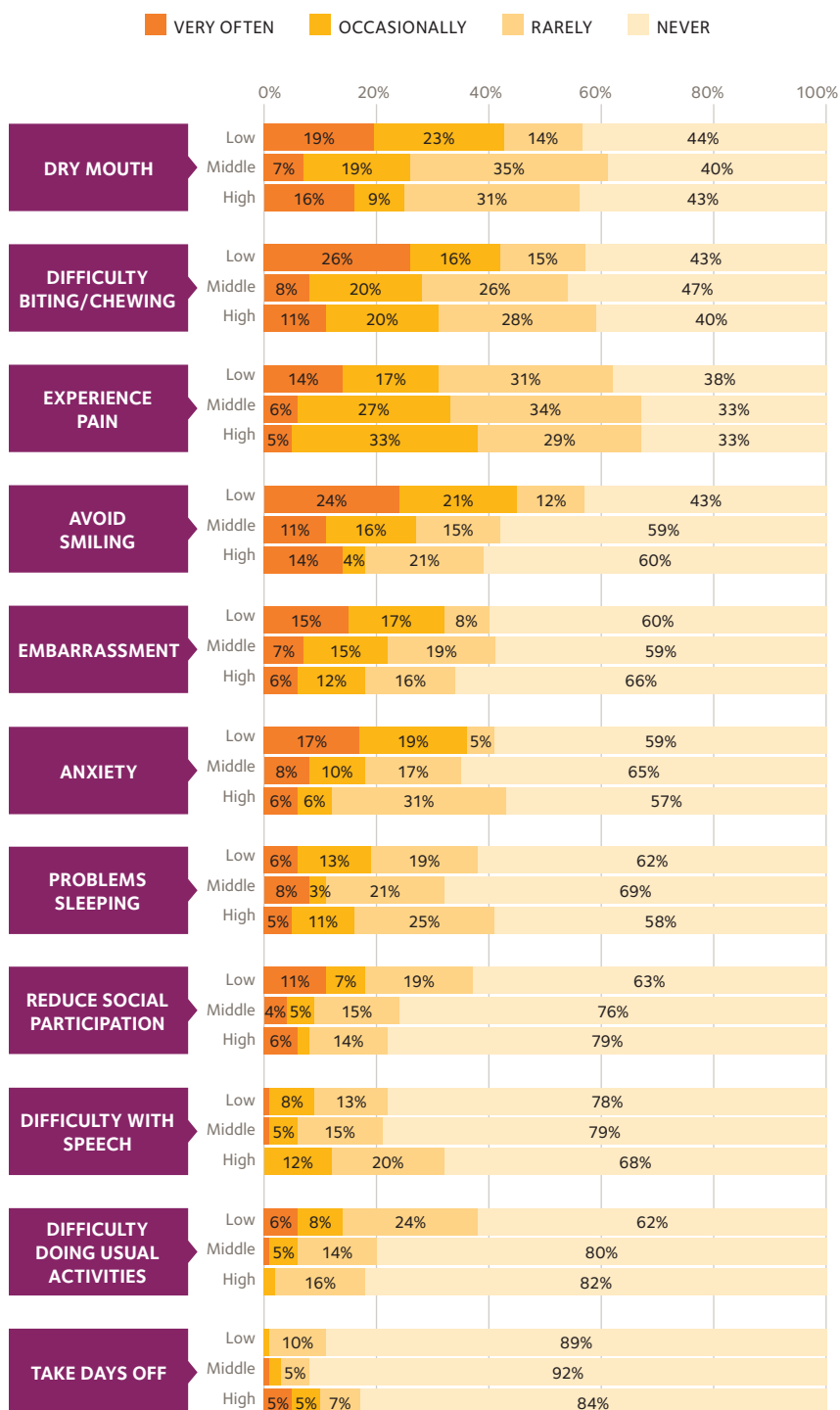


1 in 5

adults **experience anxiety** due to the condition of their mouth and teeth.

Oral Health and Well-Being in Tennessee

Problems Due to Condition of Mouth and Teeth, by Household Income



Low income adults are most likely to report having problems due to the condition of their mouth and teeth.



The top oral health problem for low income adults is **avoiding smiling**.



45% of low income adults avoid smiling due to the condition of their mouth and teeth.



38% of high income adults experience pain due to the condition of their mouth and teeth.



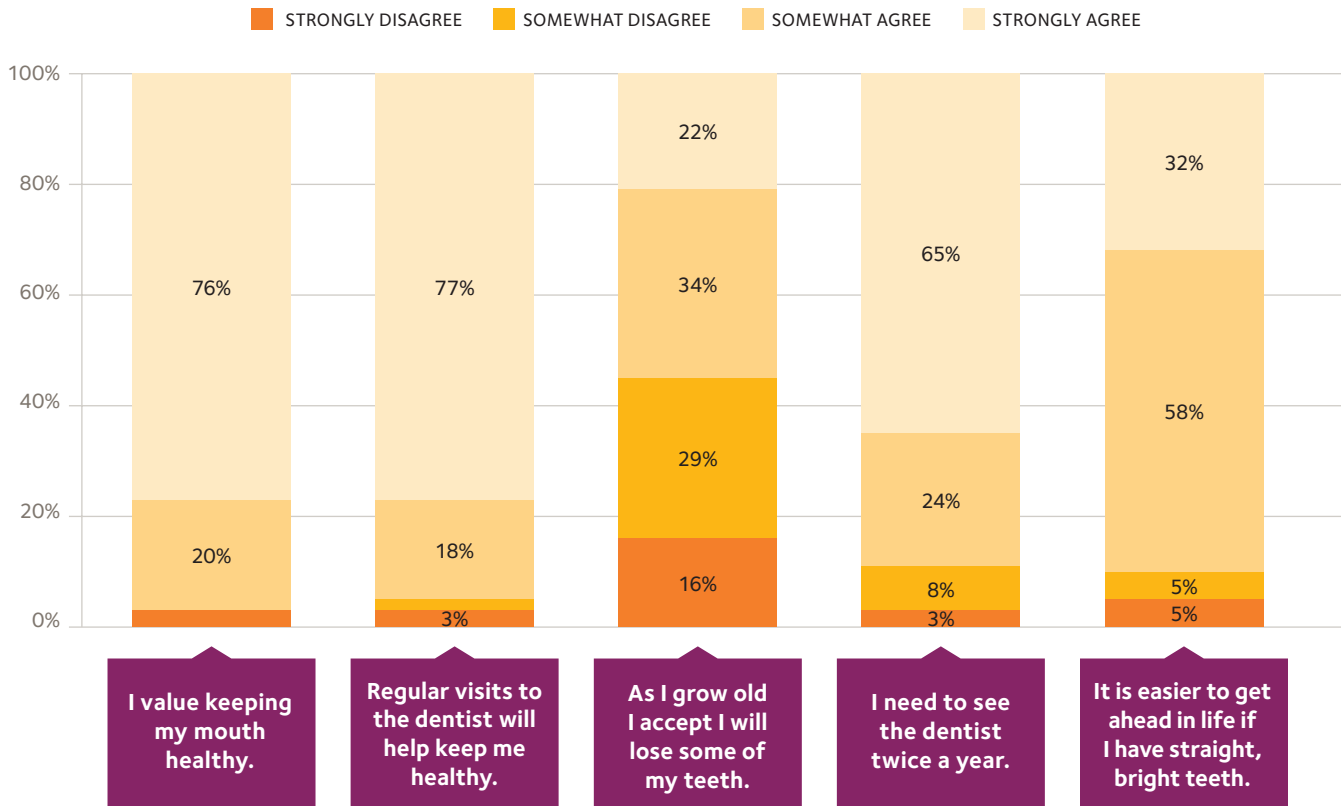
22% of middle income adults feel embarrassment due to the condition of their mouth and teeth.



18% of low income adults reduce participation in social activities due to the condition of their mouth and teeth.

Oral Health and Well-Being in Tennessee

Attitudes Toward Oral Health and Dental Care



96%
value oral health.



89%
feel they need to visit the dentist twice per year.



95%
agree regular dental visits keep them healthy.



90%
believe straight, bright teeth help you get ahead in life.

"I accept I will lose some teeth with age."



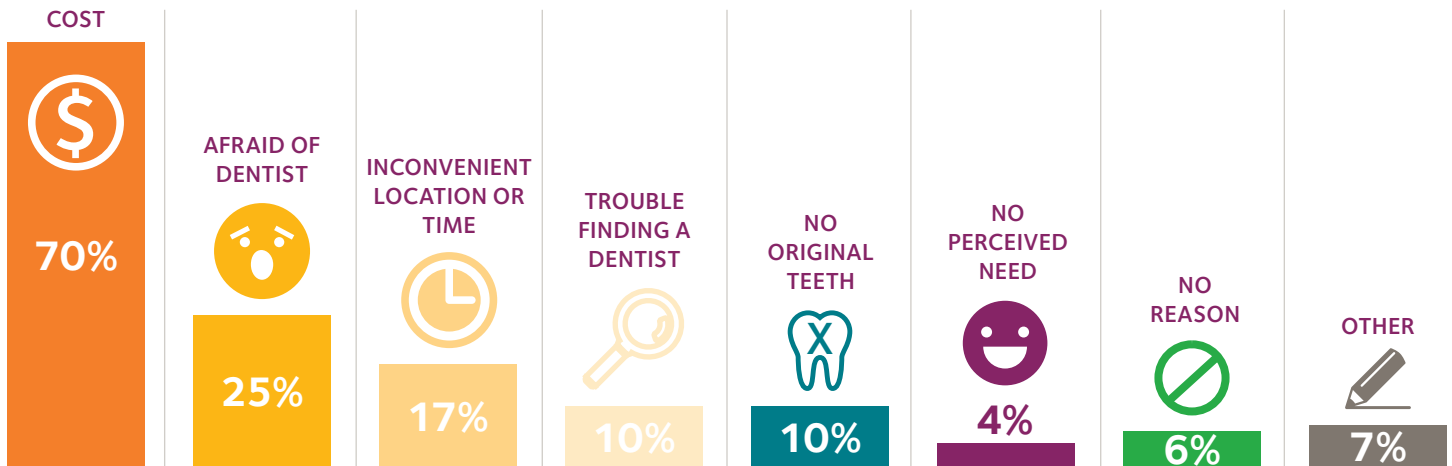
66%
low income adults



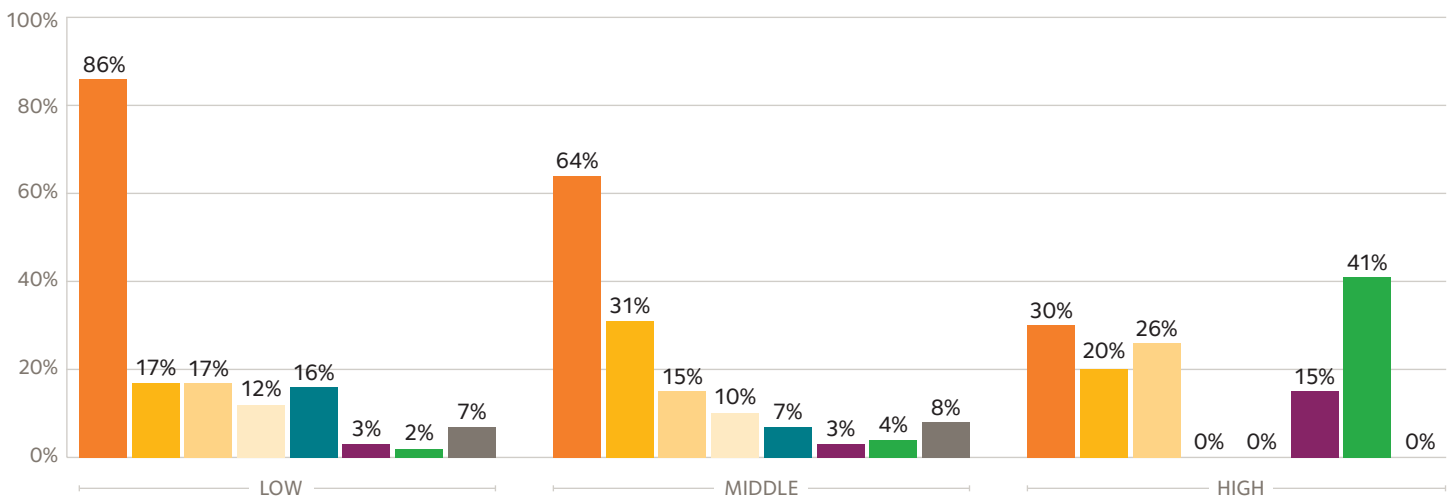
42%
high income adults

Oral Health and Well-Being in Tennessee

Reasons for Not Visiting the Dentist More Frequently, Among Those Without a Visit in the Last 12 Months



Household Income



17% of low income adults cite fear or inconvenient location or time as reasons as reasons not to visit the dentist.

31% of middle income adults cite fear as a reason not to visit the dentist.

41% of high income adults cite no reason for not visiting the dentist.

Appendix D. Healthy Smiles Initiative Report

HEALTHY SMILES INITIATIVE

Improving Dental Access Across Tennessee



October 2021

Statement of Need

Oral health services in Tennessee, particularly among high-risk and underserved populations, are severely deficient. Oral health problems can be medically dangerous, but also have important social and economic consequences. Among low- and middle-income Tennesseans, 40% say life is less satisfying due to dental conditions, and 16% say the appearance of their mouth and teeth affects their ability to get a job.¹ Nationally, more than \$45 billion is lost in U.S. productivity due to untreated dental disease.²

There is inadequate funding for current safety net services, as well as an inadequate dental workforce to meet the demand even if funding were sufficient. Among adults in Tennessee, 9.9% are uninsured³ and 7.6% are on Medicaid⁴ (with no dental benefits), which represents over 1.2 million people with no access to dental coverage.

Tennessee ranks 45th in the nation for the ratio of population to dentists. Nationally, there are approximately 60 dentists per 100,000 population, compared with 46/100K in Tennessee (commonly as low as 20/100K in some parts of Appalachia.)⁵ It is estimated that the state would need over 700 additional dentists to meet the current standard.

Tennessee has six counties without a dentist, and a 2021 Health Resources and Service Administration data shows 89 counties were designated as Health Professional Shortage Areas (HPSA).⁶

In addition to the current shortage of dentists, the American Dental Association's most recent report, *Supply of Dentists Working in the U.S.: 2001-2020*, states that among the 200,000 dentists currently working in the United States, approximately 40% will be of retirement age in 2030.⁷ At this rate, almost 1300 of Tennessee's 3,247 current dentists will retire in the next 10 years. Furthermore, the COVID-19 pandemic has accelerated the pace of retirements and created an even more emergent need. Current recruitment and retention services are insufficient to keep new graduates in-state or encourage others to

¹ <https://bettertennessee.com/report-card-dental-health-in-tennessee/>

² Centers for Medicare and Medicaid Services. 2018 National Health Expenditure Data. NHE Tables; Table 12: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistoricalexternal icon>

³ Impact of TennCare Report 2020 – The University of Tennessee Knoxville, Boyd Center for Business and Economic Research https://haslam.utk.edu/sites/default/files/tncare20_0.pdf

⁴ TennCare Enrollment Data, December 2020

https://www.tn.gov/content/dam/tn/tenncare/documents2/fte_202012.pdf

⁵ <https://www.americashealthrankings.org/learn/reports/2021-health-of-women-and-children/state-summaries-tennessee>

⁶ <https://data.hrsa.gov/tools/shortage-area/hpsa-find>

⁷ <https://www.ada.org/en/science-research/health-policy-institute/dental-statistics/workforce>

practice in areas with high-risk populations. Dental school debt is approximately \$300,000 per graduate,⁸ and minority and rural populations are under-represented in schools. Increasingly, as dentists retire from practice, many communities may be left with no dental provider.

Rural and minority communities are particularly vulnerable to dental shortages due to many contributing factors such as geographic location, poor health literacy, low income, lack of insurance, lack of transportation, workforce shortages, and diversity in the workforce. Rural populations also have a higher percentage of older adults and those with higher incidences of chronic disease that contribute to oral disease, compounding the need for more comprehensive care among these high-risk populations. In the absence of the type of care that health departments can provide, thousands delay care until disease is severe and thus must seek care in an emergency department, at a substantially higher cost to the patient and hospital.

These issues are partially addressed by several programs across the state – in piecemeal fashion – such as health departments, Federally Qualified Health Centers (FQHCs) and safety net clinics, and non-profit groups. These clinical environments serve low-income individuals who typically do not have dental coverage. Via recurring appropriation from the Tennessee General Assembly, the Tennessee Department of Health now provides funding to 30 of these dental safety net clinics. The unduplicated dental safety net patient count for the last four years is: FY18 - 14,352 patients; FY19 – 18,928 patients; FY20 - 13,271 patients; FY21- 27,395 patients.⁹ The number of patients seen declined in FY20 due to the COVID-19 pandemic and then increased in FY21 over baseline due to additional funding and the addition of clinical sites. Regardless, only a portion of the need can be met due to several factors including the lack of available work force.

Dental Workgroup

Governor Bill Lee requested that the Tennessee Department of Health (TDH) convene a working group of stakeholders, with Commissioner Piercey as chair, to develop a comprehensive public-private partnership to broaden access to high-quality, low-cost dental care to Tennesseans. Organizations participating in the working group include TDH, TennCare, dental schools, non-TDH safety net dental clinics, private sector dentists, non-profit groups, and dental payors.

⁸ <https://educationdata.org/average-dental-school-debt>

⁹ https://www.tn.gov/content/dam/tn/health/program-areas/reports_and_publications/Safety_Net_Report_FY20.pdf

The goals of this working group were to develop recommendations for addressing the urgent need for increased access to dental care in Tennessee, particularly among rural and other underserved populations. These included increasing dental school class sizes to bolster the pipeline of new dentists in the state, and better staffing of TDH clinics and safety net clinics to expand services and access for uninsured populations. Of note, none of these proposals will require legislative changes for implementation.

Name	Title	Organization & Notes
Dr. Rhonda Switzer-Nadasdi	Chief Executive Officer	Inter Faith Dental
Dr. James Ragain	Dean, College of Dentistry	UT Health Science Center College of Dentistry
Dr. Jerry G. McKinney	Assistant Professor, General Dentistry	UT Health Science Center College of Dentistry
Dr. Cherae Farmer-Dixon	Dean and Professor of Dentistry	Meharry Medical College of Dentistry
Dr. Julie Gray	Associate Dean of Community Based Education	Meharry Medical College of Dentistry
Bambi Snapp	Executive Director	TN Dental Hygienists' Association
Angie Haynes, BSDH, MS	Assistant Professor, Dept of Periodontology	TN Dental Hygienists' Association
Dr. Jeannie Beauchamp	President	Tennessee Dental Association
Dr. Phil Wenk	President & CEO	Delta Dental
Dr. Phillip Kemp	CEO & Founder	Hope Smiles
Steven Brady	Regional Vice President	DentaQuest
Dr. Chris Moore	Dentist	Moore Dental
Dr. Victor Wu	Chief Medical Officer	TennCare
Dr. James Gillcrist	Dental Director	TennCare
Stephen Smith	Deputy Commissioner	TennCare
Grant Mullins	Office of General Counsel	TDH
John Webb	Deputy Commissioner	TDH
Dr. Lisa Piercey	Commissioner	TDH
Dr. Morgan McDonald	Deputy Commissioner	TDH
Dr. Tim Jones	Chief Medical Officer	TDH
Valerie Nagoshiner	Chief of Staff	TDH

Proposal

Working Group Proposal, Budget Summary

The table below provides a five-year summary of funding for the major components of this proposal. Additional detail is provided in the expanded budget in Appendix A .

Proposal	Amount (\$)
Expanded Dental Training	50,588,700
Dental Student Externship Rotation Expansion	16,051,300
Smile On 65+	15,000,000
Prosthodontic Grant Program	5,000,000
Workforce Recruitment and Retention	5,000,000
Dental Student Host Site Support	1,800,000
Capital Improvements	750,000
Community Dental Health Coordinator Training	180,000
Total Five-Year Request	<u>\$ 94,370,000</u>

Expansion of Access to Dental Training

Dental school capacity to enroll and train residents of Tennessee is essential to meet the need for dental care across the state. This portion of the proposal was developed by the University of Tennessee Health Science Center College of Dentistry (UTCOD) and Meharry Medical College Dental School (MDS). Recruiting health professions students from local communities is essential to employing them in those communities. Similarly, Tennessee dental schools report that most of their dental students want to return to their local Tennessee community to practice following graduation. However, limited dental school enrollment in the state has restricted residents of Tennessee from training in Tennessee and, therefore, staying to practice in Tennessee. Recently only one out of every 18 qualified dental school applicants have been admitted to UTCOD and MDS due to enrollment limitations. The Healthy Smiles Initiative would increase dental school enrollment by expanding class size at both UTCOD and MDS. The class size at UTCOD is currently 100 and will increase to 130. Class size at MDS is currently 72 and will increase to 85. It is currently mandated that 30 slots in the UTDOC are reserved for students from Arkansas. However, all additional student enrollment in this proposal will be preferentially filled with applicants from Tennessee.

These expansions will be implemented stepwise over 5 years, as reflected in the proposed budget. Implementation will require adding faculty, administrative support, and training equipment to the educational facilities.

Dental Student Externship Rotation Expansion

Health professions students who train in rural and underserved areas are more likely to ultimately practice there following graduation.¹⁰ Providing training in the most needed areas of the state is therefore a keystone of this proposal. The state has multiple public health departments that are equipped for standard dental practice but have no dentist. Additional regions of the state have medium to large FQHCs and charitable care clinics equipped with dental operatories. This initiative would place dental residents, students, and faculty in underserved locations where they can provide care for underserved populations.

Expanded training in dental schools and externships will focus specifically on attracting students committed to working long-term in high need areas of the state. This will include recruiting students from underserved areas in Tennessee who would be interested in returning to their home communities, with which they are already familiar. “Externship” training for dental students and placement of residents in these settings will also provide immediate services as well as on-the-ground experience in treating these populations for students and residents, with the expectation that many of them will subsequently practice in those areas.

Smile On 65+ Program Expansion

The Smile On 60+ program provides statewide oral health care and case management services for older adults, in addition to addressing social determinants of health, and establishes a pipeline of skilled geriatric care dentists and teams. The program funds charitable clinics and FQHCs and has served approximately 10,000 older adults over the course of its three year, \$12.5M pilot, which expires this year. The Healthy Smiles Initiative would continue the program for an additional five years, change the age to adults 65+ to better align with the Denture Program and other existing safety net services, and expand the program by \$3 million annually to serve additional clients.

¹⁰ <https://onlinelibrary.wiley.com/doi/abs/10.1111/jrh.12244>

Prosthodontic Grant Program

Championed by the late State Representative Charles Sargent, state funds supported some of the cost of dentures for working-age Tennesseans (18-64yo) seen in charitable care clinics. The program, administered by the Smile 180 Foundation, has helped 2300 Tennesseans with significant oral health challenges to improve their quality of life, including gaining employment through the transformative power of a healthy smile. Funding ended in 2020, and this proposal would extent the program with \$1 million annually for the duration of the proposal.

Provider Recruitment and Retention

Dental students finish their training with an average of \$300,000 in debt. Without assistance in repaying extensive loans, graduates are frequently unable to even consider working in underserved areas because of lower income potential. Similar to federal and state programs which provide education loan repayment for providers working in underserved areas, we propose that the State of Tennessee substantially relieve student debt for dental providers who work in health department dental clinics or safety net clinics. Preference will be given to in-state graduates. Both Tennessee dental schools are committed to providing clinical support for newly placed dentists as needed and collaborating with the Department of Health to identify underserved areas and establish mentoring relationships with other practitioners and specialists in those regions.

This Healthy Smiles Initiative would provide educational loan repayment for dental providers using the following payment approach: Dentists (\$100,000/year for three years); Hygienists (\$25,000/year for two years); and Assistants (\$10,000/year for two years) with a budget of \$1 million per year. The loan repayment would be immediately offered to address vacancies in health department dental clinics and then would be expanded to other safety net dental clinics. The dental professionals receiving loan repayment would provide care in areas of high need and support training of additional dental students.

Advanced Training

Currently, because of lack of staffing and a high demand for basic services, many dentists are providing services below the level of their training. Expanded Function Dental

Assistance (EFDA) training provides dental assistants advanced training, via existing mechanisms, to enable Dental Assistants to provide a higher level of service under supervision of a dentist, in order to expand the number of patients that can be seen for a variety of services. This training is currently available through Tennessee dental schools on a limited basis. This proposal includes funding for dental schools to increase enrollment for dental assistants practicing in rural and safety net settings.

Capital Improvements

Proposed funding adds additional exam chairs to existing clinics. Many TDH facilities currently have only one or two exam chairs. This dramatically limits efficiency in these sites. With appropriate staff support, a single dentist can use 3-4 rooms concurrently to provide care to far more patients than is currently possible. The funding proposed here would augment additional federal funding requested by TDH. As capital projects, it is expected that these changes would begin to have a demonstrable effect on services after two years.

Tennessee Department of Health

The Department of Health has made major investments in building 46 well-equipped dental operatories in 45 counties. Currently, only 30 of these facilities are operational, and many are staffed only 1-2 days per week. Eight (40%) dentist positions and 15 (50%) other clinical staff positions in TDH clinics are vacant. This is largely due to non-competitive salaries and lack of incentives for recruitment and retention. Prior to the pandemic, TDH dental clinics performed approximately 30,000 visits per year, primarily for relatively simple procedures (e.g., extractions, basic restorative care, urgent palliative care, etc.).

The initiatives described in the previous subsections will each improve the efficiency and capacity of TDH dental services statewide. Expansion of the workforce and addition of clinic space in existing sites are expected to have particularly large impacts. Currently, TDH clinics provide approximately 30,000 patient visits per year. Through this proposal, patient volume is projected to grow by 30% over the first two years, and once clinical space is added, productivity will increase more substantially (up to 50%) in years three and four, with a goal of at least 75,000 visits per year at the end of this 5-year project.

Community Dental Health Coordinators

Community Dental Health Coordinators (CDHC) are generally dental hygienists or dental assistants with additional CDHC training. CDHCs are a vital link between a community and the healthcare system. They are often from the local community and are a trusted educational resource. They understand how to navigate the healthcare system and can help connect people to safety net clinics, even removing barriers to access like transportation and helping motivate people to seek help and change behaviors. Additionally, if a CDHC is a registered dental hygienist, s/he can gather information such as health history, chief complaint, and symptoms, and make appropriate and timely referrals. The budget for this program is estimated at \$180,000 for tuition/training scholarships and oversight of this group.

Additional Safety Net Impacts

In FY 2021, the Health Care Safety Net Fund provided approximately \$1.8 million in funding to 30 Community and Faith-Based organizations to support oral health services for uninsured adults ages 19-64, and approximately 42,000 dental encounters were provided. Many of the programs described in this proposal, including loan repayment assistance, and increasing the number of dentists in the state, would help increase the capacity of safety-net organizations in meeting the needs in high-risk populations.

Collaborative Oversight of Dental Initiatives

To ensure ongoing alignment of the diverse programming recommended in this report, this dental working group recommends a regular convening of an advisory committee. This committee would reflect a similar composition to the initial dental working group and would assist with ongoing planning and engagement of the private sector in the placement of dental professionals.

Summary

This Healthy Smiles Initiative is the product of a group of diverse stakeholders committed to improving and expanding dental care access in Tennessee. The need is urgent and essential to improving the overall health and quality of life of Tennesseans. This plan addresses the crisis of unmet dental health needs at a variety of levels. It begins with targeting the earliest stages of recruiting students into dental professions, training them to practice in underserved communities, and providing recruiting and retention incentives for service in high need populations. In addition to increasing the pipeline of dentists to serve in these areas, current safety-net services will be expanded. This includes advanced training for dental assistants and providing dentures in charitable care clinics. TDH clinics will increase staff and available facilities, serve as training sites for students, and increase ongoing capacity to see more patients. This plan will dramatically improve the long-term dental health landscape for generations to come. We are excited to be part of such a historic investment in the health of our population.

Appendix A – Healthy Smiles Initiative Budget

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Five -Year Total
Total Dental Workgroup Request	\$ 11,868,000	\$ 16,000,000	\$ 18,057,800	\$ 24,222,100	\$ 24,222,100	\$ 94,370,000
Tennessee Department of Health	\$ 5,180,000	\$ 5,000,000	\$ 5,250,000	\$ 6,540,000	\$ 6,540,000	\$ 28,510,000
Prosthodontic Grant Program	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Smile On 65+	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000
Dental Loan Repayment Program	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Capital Improvement - Expanded Capacity	-	-	250,000	250,000	250,000	750,000
Clinic Incentive Payments	-	-	-	300,000	300,000	600,000
Housing and Transportation Costs	-	-	-	90,000	90,000	180,000
Community Dental Training	180,000	-	-	-	-	180,000
Additional Dental Training Staff	-	-	-	900,000	900,000	1,800,000
University of Tennessee College of Dentistry	\$ 4,729,200	\$ 8,491,000	\$ 9,978,800	\$ 14,853,100	\$ 14,853,100	\$ 52,905,200
Salary Market Adjustments	1,924,400	1,980,000	2,091,000	2,210,000	2,210,000	10,415,400
New Dental Faculty @ Primary Campuses	801,400	1,452,600	2,754,800	5,609,900	5,609,900	16,228,600
New Sciences Faculty @ Primary Campuses	1,910,800	5,244,800	4,242,300	6,408,600	6,408,600	24,215,100
Administrative Staff and Support	142,600	258,600	490,400	998,600	998,600	2,888,800
Equipment Replacement	-	425,000	425,000	425,000	425,000	1,700,000
New Remote Clinic Faculty	-	-	150,000	150,000	150,000	450,000
New Remote Clinic Staff	-	-	211,200	211,200	211,200	633,600
Remote Clinic Recurring Operational Costs	-	-	361,200	361,200	361,200	1,083,600
Clinic Operations	-	-	902,900	1,838,600	1,838,600	4,580,100
Contingency	430,000	-	-	-	-	430,000
LESS: Tuition	(480,000)	(870,000)	(1,650,000)	(3,360,000)	(3,360,000)	(9,720,000)
Meharry Medical College Dental School	\$ 1,958,800	\$ 2,509,000	\$ 2,829,000	\$ 2,829,000	\$ 2,829,000	\$ 12,954,800
Salary Market Adjustments	-	300,000	300,000	300,000	300,000	1,200,000
New Dental Faculty @ Primary Campuses	744,000	1,332,000	1,332,000	1,332,000	1,332,000	6,072,000
New Sciences Faculty @ Primary Campuses	446,400	892,800	892,800	892,800	892,800	4,017,600
Administrative Staff and Support	111,600	167,400	167,400	167,400	167,400	781,200
Equipment Replacement	-	220,000	220,000	220,000	220,000	880,000
Maury Co. HD - Remote Clinic Faculty/Resident	254,200	254,200	254,200	254,200	254,200	1,271,000
Montgomery Co. HD - Remote Clinic Faculty/Resident	254,200	254,200	254,200	254,200	254,200	1,271,000
Wilson Co. HD - Remote Clinic Faculty/Resident	254,200	254,200	254,200	254,200	254,200	1,271,000
Grundy Co. HD - Remote Clinic Faculty/Resident	254,200	254,200	254,200	254,200	254,200	1,271,000
EFDA Faculty	-	-	320,000	320,000	320,000	960,000
Contingency	430,000	-	-	-	-	430,000
LESS: Tuition	(790,000)	(1,420,000)	(1,420,000)	(1,420,000)	(1,420,000)	(6,470,000)

Appendix E. August 2022 Dental Workgroup Meeting Attendees

Name	Title	Organization & Notes
Dr. Cherae Farmer-Dixon	Dean and Professor of Dentistry	Meharry Medical College of Dentistry
Dr. James Ragain	Dean, College of Dentistry	UT Health Science Center College of Dentistry
Dr. Phil Wenk	President & CEO	Delta Dental
Holly Plemmons	Senior Program Director, Smile On 60+	Interfaith Dental Clinic
Dr. Morgan McDonald	Commissioner	Tennessee Department of Health
Elizabeth Foy	Chief of Staff	Tennessee Department of Health
Dr. Tim Jones	Chief Medical Officer	Tennessee Department of Health
Alan Goodwin	Assistant Commissioner, Division of Community Health Services	Tennessee Department of Health
Dr. Kimberly Lamar	Assistant Commissioner, Division of Health Disparities	Tennessee Department of Health
Kristina Pilgreen	Director, Office of Rural Health	Tennessee Department of Health
Dr. Jill Obremskey	Medical Director, Community Health Services	Tennessee Department of Health
Dr. Suzanne Hayes	Interim State Dental Director, Oral Health Services	Tennessee Department of Health
Laura Johnson	Public Health Admin, Oral Health Services	Tennessee Department of Health
Sarah Elliott	State Health Plan Manager, Office of Health Planning	Tennessee Department of Health

